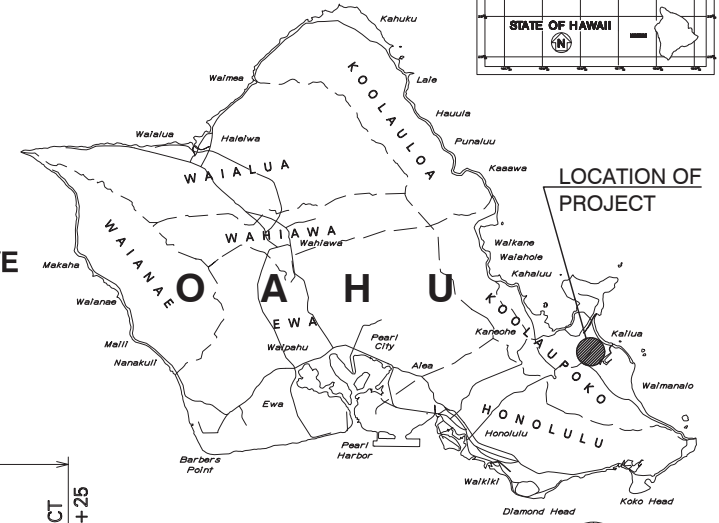
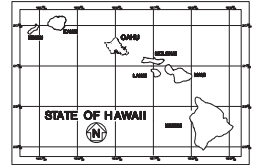


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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
OAHU, HAWAII

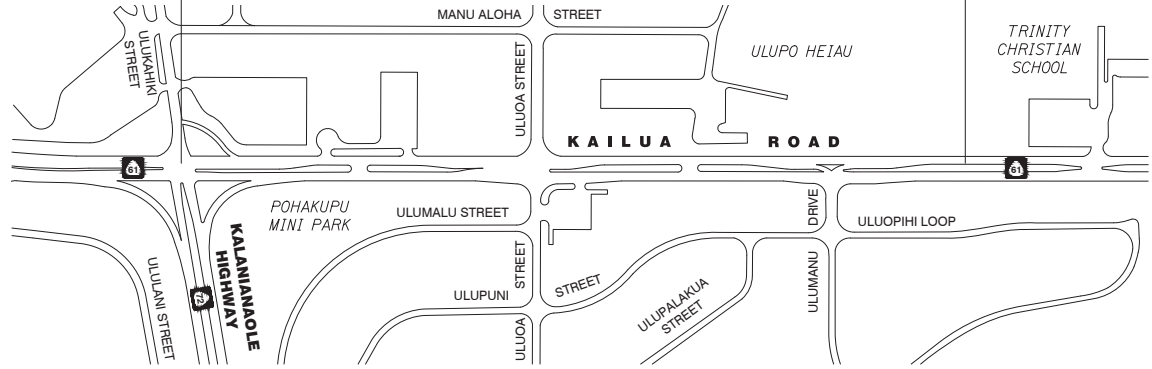
PLANS FOR
**KAILUA ROAD
INTERSECTION IMPROVEMENTS**
VICINITY OF ULUOA STREET AND ULUMANU DRIVE
PROJECT NO. 61D-01-23

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	1	87

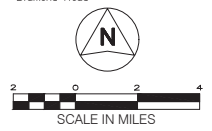


DISTRICT OF KOOLAUPOKO
ISLAND OF OAHU

LIMITS OF PROJECT



LAYOUT PLAN
LENGTH OF PROJECT0.5 MILES



MILE POST 9.49 TO MILE POST 9.96

APPROVALS:

DIRECTOR, DEPARTMENT OF PLANNING AND PERMITTING CITY & COUNTY OF HONOLULU (FOR CONSTRUCTION IN CITY RIGHT-OF-WAY ONLY) DATE

DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII
APPROVED: _____ DATE
Nov 3, 2023
DIR. OF TRANSPORTATION

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE BY	
APPROVED BY	
DATE	

COMMUNITY PLANNING & ENGINEERING, INC. HWY-TO DECEMBER 2023
DESIGNED BY (808) 892-7691 PHONE DATE

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	2	87

STANDARD PLAN NO.	TITLE	DATE	STANDARD PLAN NO.	TITLE	DATE	STANDARD PLAN NO.	TITLE	DATE	STANDARD PLAN NO.	TITLE	DATE
B-01	Notes & Miscellaneous Details	05/31/07	H-01A	Type A Catch Basin	05/31/07	TE-09	Bike Route Sign & Supplementary Plates	07/11/08	TE-32	Type I & II Traffic Signal System Misc. Details	05/31/07
B-03	Backfill Details At Earth Retaining Structures	05/31/07	H-01B	Type B Catch Basin	05/31/07	H-010	Interstate Route Marker	07/11/08	TE-33	Type II Traffic Signal System	08/16/06
B-12	Prestressed Concrete Piles & Compression Splice Can Details	05/31/07	H-01C	Type C Catch Basin	05/31/07	TE-11	State Route Marker And Auxiliary Markers	07/11/08	TE-33AJ	Type II Traffic Signal Standard	05/31/07
B-12A	Prestressed Concrete Piles, Pile & Compression Splice Can Details & Notes	05/31/07	H-01D	Type D Catch Basin	05/31/07	TE-12	State Route Marker And Border Detail For Guide Signs	07/11/08	TE-33A2	Type II Traffic Signal Standard	05/31/07
B-12B	Pile Interaction Diagram	05/31/07	H-01E	Catch Basin Sections	05/31/07	TE-12A	Route Sign Assemblies	07/11/08	TE-34	Loop Detector Details	07/11/08
B-13	Prestressed Concrete Pile Build-up Details	05/31/07	H-02A	Type A1 Catch Basin	05/31/07	TE-13	Street Name Sign On Mast Arm	07/11/08	TE-35	Loop Detectors & Duct Details	07/11/08
			H-02B	Type B2 Catch Basin	05/31/07	TE-14	Miscellaneous Reflector Markers	07/11/08	TE-36	Traffic Signal Details	07/11/08
			H-02C	Type C1 Catch Basin	05/31/07	TE-15	Object Markers	07/11/08	TE-37	Pullbox & Cover Details	07/11/08
			H-02D	Type D1 Catch Basin	05/31/07	TE-16	Mile Posts	07/11/08	TE-37A	Type "A" Traffic Pullbox	05/31/07
			H-02E	Catch Basin Section	05/31/07	TE-17A	Cantilever Overhead Sign Elevation & Details	05/31/07	TE-37B	Type "A" Traffic Pullbox Reinforcing	05/31/07
			H-03	Type A, B, And C Storm Drain Manhole	05/31/07	TE-17B	Cantilever Sign Frame Detail And Section	05/31/07	TE-37C	Type "B" Traffic Pullbox	05/31/07
			H-04	Type D Storm Drain Manhole	05/31/07	TE-17C	Cantilever Sign Frame Detail	05/31/07	TE-37D	Type "B" Traffic Pullbox Reinforcing	05/31/07
			H-05	Typical Reinforcing Details For Drainage Structures	05/31/07	TE-17D	Cantilever Sign Frame Section	05/31/07	TE-37E	Type "B" Traffic Pullbox Foundation	05/31/07
			H-06	Typical Reinforcing Details For Drainage Structures	05/31/07	TE-17E	Cantilever Sign Frame Details	05/31/07	TE-37F	Type "C" Traffic Pullbox	05/31/07
			H-07	Catch Basin And Manhole Castings	05/31/07	TE-17F	Cantilever Sign Frame Details	05/31/07	TE-37G	Type "C" Traffic Pullbox Reinforcing	05/31/07
			H-08	Type 1a-9 And 1a-9p Grated Drop Inlet	05/31/07	TE-17G	Two Post Overhead Sign Frame Elevations	05/31/07	TE-37H	Type "C" Traffic Pullbox Foundation	05/31/07
			H-09	Type 2a-9 And 2a-9p Grated Drop Inlet	05/31/07	TE-17H	Two Post Sign Framing Sign Section	05/31/07	TE-37J	Traffic Pullbox Cover And Details	05/31/07
			H-10	Type A-9 Or A-9p Steel Frames	05/31/07	TE-17I	Two Post Sign Framing Sections And Details	05/31/07	TE-38	Type III Traffic Signal Standard	05/31/07
			H-11	Type A-9 And A-9p Steel Frames	05/31/07	TE-17J	Two Post Sign Frame Details	05/31/07	TE-38AJ	Type III Traffic Signal Standard	05/31/07
			H-12	Type 61614p And 121214p Grated Drop Inlet	05/31/07	TE-17K	Two Post Sign Frame Details	05/31/07	TE-38A2	Type III Traffic Signal Standard	05/31/07
			H-13	Type 61616p And 121216p Grated Drop Inlet	05/31/07	TE-17L	Overhead Sign Framing Schedule	05/31/07	TE-39	Metal Guardrail Connection To Concrete Barrier	07/11/08
			H-14	Type 61214p Grated Drop Inlet	05/31/07	TE-17M	Sign Post Drilled Shaft Foundation	05/31/07	TE-40	Concrete Barrier Transition	05/31/07
			H-15	Type 121214, 121214p, 121216, 121216p Steel Frame And Grates	05/31/07	TE-17N	Spread Footing	05/31/07	TE-40A	Concrete Barrier Transition Sections	05/31/07
			H-16	Type 61614, 61614p, 61616, 61616p Steel Frame And Grates	05/31/07	TE-17O	Sign Frame Foundation Schedule	05/31/07	TE-41	Guardrail Type 4 (rigid Barrier)	05/31/07
			H-17	Type 61214 Steel Frames And Grates	05/31/07	TE-17P	Sign Frame Foundation Schedule	05/31/07	TE-42	Portable Concrete Barrier	05/31/07
			H-18	Type 61214p Steel Frames	05/31/07	TE-17Q	Sign Frame Foundation Schedule	05/31/07	TE-43	Portable Concrete Barrier	05/31/07
			H-19	Type 61614b Steel Frame And Grates	05/31/07	TE-17R	Sign Frame Foundation Schedule	05/31/07	TE-44	Guardrail Type 4 Miscellaneous Details	07/11/08
			H-20	Cement Rubble Masonry Structures	05/31/07	TE-17S	Sign Frame Foundation Schedule	05/31/07	TE-45	Barricades	07/11/08
			H-21	Concrete And Cement Rubble Masonry Structures	05/31/07	TE-17T	Sign Frame Foundation Schedule	05/31/07	TE-46	Delineation & Pavement Markings At Narrow Bridges	07/11/08
			H-22	Inlet/outlet Structure	05/31/07	TE-17U	Sign Frame Foundation Schedule	05/31/07	TE-47	Highway Light Standard	05/31/07
			H-23	Inlet/outlet Structure	05/31/07	TE-17V	Sign Frame Foundation Schedule	05/31/07			
			H-24	Flared End Section For Culverts	05/31/07	TE-17W	Sign Frame Foundation Schedule	05/31/07			
			H-25	Flared End Section For Culverts	05/31/07	TE-17X	Sign Frame Foundation Schedule	05/31/07			
			H-26	Concrete Spillway Inlet	05/31/07	TE-17Y	Sign Frame Foundation Schedule	05/31/07			
			H-27	Cap Coupling Details Standard Joint	05/31/07	TE-17Z	Sign Frame Foundation Schedule	05/31/07			
			H-28	Reinforced Concrete Collar & Jacket	05/31/07	TE-17AA	Sign Frame Foundation Schedule	05/31/07			
			H-29	Underdrain Cleanout Steel Frame And Cover	05/31/07	TE-17AB	Sign Frame Foundation Schedule	05/31/07			
			H-30	Underdrain Connection To Drainage Structure	05/31/07	TE-17AC	Sign Frame Foundation Schedule	05/31/07			
			TE-01	Sign Height And Location	07/11/08	TE-17AD	Sign Frame Foundation Schedule	05/31/07			
			TE-1A	Sign Installation	07/11/08	TE-17AE	Sign Frame Foundation Schedule	05/31/07			
			TE-02A	Galvanized Flanged Channel Sign Post Mounting	05/31/07	TE-17AF	Sign Frame Foundation Schedule	05/31/07			
			TE-02B	Galvanized Flanged Channel Sign Post Mounting	05/31/07	TE-17AG	Sign Frame Foundation Schedule	05/31/07			
			TE-02C	Galvanized Flanged Channel Sign Post Mounting	05/31/07	TE-17AH	Sign Frame Foundation Schedule	05/31/07			
			TE-03A	Galvanized Square Tube Sign Post Mounting	05/31/07	TE-17AI	Sign Frame Foundation Schedule	05/31/07			
			TE-03B	Galvanized Square Tube Sign Post Mounting	05/31/07	TE-17AJ	Sign Frame Foundation Schedule	05/31/07			
			TE-04	Regulatory Signs	07/11/08	TE-17AK	Sign Frame Foundation Schedule	05/31/07			
			TE-05	Warning Signs	07/11/08	TE-17AL	Sign Frame Foundation Schedule	05/31/07			
			TE-06	Miscellaneous Signs	07/11/08	TE-17AM	Sign Frame Foundation Schedule	05/31/07			
			TE-07	Construction Signs	07/11/08	TE-17AN	Sign Frame Foundation Schedule	05/31/07			
			TE-08	Miscellaneous Intersection Signs	07/11/08	TE-17AO	Sign Frame Foundation Schedule	05/31/07			
						TE-17AP	Sign Frame Foundation Schedule	05/31/07			
						TE-17AQ	Sign Frame Foundation Schedule	05/31/07			
						TE-17AR	Sign Frame Foundation Schedule	05/31/07			
						TE-17AS	Sign Frame Foundation Schedule	05/31/07			
						TE-17AT	Sign Frame Foundation Schedule	05/31/07			
						TE-17AU	Sign Frame Foundation Schedule	05/31/07			
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						TE-17AW	Sign Frame Foundation Schedule	05/31/07			
						TE-17AX	Sign Frame Foundation Schedule	05/31/07			
						TE-17AY	Sign Frame Foundation Schedule	05/31/07			
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						TE-17BA	Sign Frame Foundation Schedule	05/31/07			
						TE-17BB	Sign Frame Foundation Schedule	05/31/07			
						TE-17BC	Sign Frame Foundation Schedule	05/31/07			
						TE-17BD	Sign Frame Foundation Schedule	05/31/07			
						TE-17BE	Sign Frame Foundation Schedule	05/31/07			
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						TE-17BG	Sign Frame Foundation Schedule	05/31/07			
						TE-17BH	Sign Frame Foundation Schedule	05/31/07			
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						TE-17BP	Sign Frame Foundation Schedule	05/31/07			
						TE-17BQ	Sign Frame Foundation Schedule	05/31/07			
						TE-17BR	Sign Frame Foundation Schedule	05/31/07			
						TE-17BS	Sign Frame Foundation Schedule	05/31/07			
						TE-17BT	Sign Frame Foundation Schedule	05/31/07			
						TE-17BU	Sign Frame Foundation Schedule	05/31/07			
						TE-17BV	Sign Frame Foundation Schedule	05/31/07			
						TE-17BW	Sign Frame Foundation Schedule	05/31/07			
						TE-17BX	Sign Frame Foundation Schedule	05/31/07			
						TE-17BY	Sign Frame Foundation Schedule	05/31/07			
						TE-17BZ	Sign Frame Foundation Schedule	05/31/07			
						TE-17CA	Sign Frame Foundation Schedule	05/31/07			
						TE-17CB	Sign Frame Foundation Schedule	05/31/07			
						TE-17CC	Sign Frame Foundation Schedule	05/31/07			
						TE-17CD	Sign Frame Foundation Schedule	05/31/07			
						TE-17CE	Sign Frame Foundation Schedule	05/31/07			
						TE-17CF	Sign Frame Foundation Schedule	05/31/07			
						TE-17CG	Sign Frame Foundation Schedule	05/31/07			
						TE-17CH	Sign Frame Foundation Schedule	05/31/07			
						TE-17CI	Sign Frame Foundation Schedule	05/31/07			
						TE-17CJ	Sign Frame Foundation Schedule	05/31/07			
						TE-17CK	Sign Frame Foundation Schedule	05/31/07			
						TE-17CL	Sign Frame Foundation Schedule	05/31/07			
						TE-17CM	Sign Frame Foundation Schedule	05/31/07			
						TE-17CN	Sign Frame Foundation Schedule	05/31/07			
						TE-17CO	Sign Frame Foundation Schedule	05/31/07			
						TE-17CP	Sign Frame Foundation Schedule	05/31/07			
						TE-17CQ	Sign Frame Foundation Schedule	05/31/07			
						TE-17CR	Sign Frame Foundation Schedule	05/31/07			
						TE-17CS	Sign Frame Foundation Schedule	05/31/07			
						TE-17CT	Sign Frame Foundation Schedule	05/31/07			
						TE-17CU	Sign Frame Foundation Schedule	05/31/07			
						TE-17CV	Sign Frame Foundation Schedule	05/31/07			
						TE-17CW	Sign Frame Foundation Schedule	05/31/07			
						TE-17CX	Sign Frame Foundation Schedule	05/31/07			
						TE-17CY	Sign Frame Foundation Schedule	05/31/07			
						TE-17CZ	Sign Frame Foundation Schedule	05/31/07			
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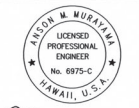
GENERAL NOTES

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	3	87

- The scope of work for this project consists of new traffic signal systems at the Kailua Road and Uluaa Street intersection and the Kailua Road and Ulumanu Drive intersection, and related roadway improvements in the areas.
- The Contractor is reminded of the requirements of Subsection 105.16 - Subletting of Contract, which requires him to perform work to not less than 30 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.
- The Contractor's attention is directed to the following Sections of the Special Provisions: Subsection 104.11 - Utilities and Services; Subsection 107.06 - Contractor Duty Regarding Public Convenience; Subsection 107.11 - Safety: Accident Prevention; Subsection 107.12 - Protection of Persons and Property; and Section 645 - Work Zone Traffic Control.
- The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting construction operations.
- At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.
- The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data, but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall tone for the exact locations and depths of all underground facilities, either shown on or omitted from the plans, in areas where work, such as the placement of sign posts, traffic signal conduits, etc. may affect these properties. Toning shall be considered incidental to the various contract items and will not be paid for separately. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations. All damaged portions shall be replaced in accordance with the standards and specifications of the affected utility company at the Contractor's expense.
- The existing drainage system will be functional at all times during construction. The Contractor shall furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to various contract items and will not be paid for separately.
- The Contractor shall provide for and maintain access to and from all existing driveways, sidewalks, and Americans with Disabilities Act (ADA) access routes complying with ADAAG Section 4.3, and side streets and cross streets at all times. This work shall be considered incidental to various contract items and will not be paid for separately.
- The Contractor shall provide and maintain a temporary pedestrian-safe and easily accessible route or detour with barricades in or near the work zone. This temporary route or detour shall be paved at least an inch of Asphalt Concrete Pavement, Mix No. V or steel and/or wood planks and shall be ADA compliant (This is only applicable if existing surface is dirt and/or if existing surface is non-ADA compliant). This work shall be incidental to various contract items and will not be paid for separately.
- All saw cutting work shall be considered incidental to various contract items and will not be paid for separately. Saw cutting work with hand/handheld tools is not permitted.
- Where pedestrian walkways exist, they shall be maintained in a safe and passable ADA compliant condition, or other facilities for pedestrians shall be provided. Passages between walkways at intersections shall likewise be provided at all times. The Contractor shall maintain at least one paved shoulder free and clear of debris for pedestrian and bicycle traffic at the end of each work day. The Contractor shall provide for access to and from all existing driveways at all times. The Contractor shall coordinate with the Homeowner if driveway closure is required.
- The Contractor shall comply with the directives of the State of Hawaii Occupational Health and Safety Law (HIOSH). Any citation (fine) received by the State for noncompliance by the Contractor shall be deducted from the progress payment.
- This project may affect bus operations, bus routes, bus stops, and para-transit operations. At least two (2) weeks prior to construction, the Contractor shall provide notification of the scope of work, location, detour, proposed closure of any street, traffic lane, sidewalk, or bus stop and duration of project to:

DTS-PTD: 768-8396 and TheBusStop@honolulu.gov
Oahu Transit Services:
Bus Operations: 848-4578 or 852-6016 and Field_Operation_Mgr@thebus.org
Para-transit Operations: 454-5041 or 454-5020
- The Contractor shall follow the requirements of various permits and Best Management Practices (BMP) during the construction.
- No work or equipment shall be located or take place within 10' of any overhead wires or any HECO utility pole without prior acceptance from the Engineer and HECO. No excavation shall take place within 5' of any HECO utility pole without prior acceptance from the Engineer and HECO.
- The Contractor is advised that in addition to other Contractors working in the same areas, various utility companies (or their contractors) including Hawaiian Electric Company, Hawaiian Telcom, Spectrum, Hawaii Gas, and the Board of Water Supply (BWS) may be performing work within the project area. Comply with Subsection 105.09 Coordination Between the Contractors.
- The Contractor shall coordinate all work with other Contractors in the areas. In case of unreasonable conflict among contractors regarding access or work sites, the Engineer will make the final determination of priorities.
- Smooth riding connections shall be constructed at all limits of the project, including the beginning and end of project, connecting approaches, side streets, driveways and all trench repairs as shown on the plans and/or as directed by the Engineer. Test in the presence of the Engineer with a 12-foot straight edge all pavement surface areas mentioned. It shall not vary more than 1/8 inch from the lower edge of a straightedge. Driveways may be excluded by the Engineer and another method used. This work shall be considered incidental to various contract items and will not be paid for separately.
- All necessary permits shall be obtained by the Contractor at his own cost.
- Removal and disposal of existing curb and gutter, curb, sidewalk and asphalt concrete pavement, curb, sidewalk and any debris shall be considered incidental to their respective bid items.
- Provide smooth transition where new sidewalk construction meets the existing grade or sidewalk. Transition shall not be steeper than 2% cross and longitudinal slopes and not less than 6.0 feet long or as specified on the plans. This work shall be considered incidental to various contract items and will not be paid for separately.
- The Contractor shall remove and dispose of all existing raised pavement markers, thermoplastic line markings, traffic tapes, and epoxy adhesives prior to the overlaying of Asphalt Concrete. This work shall be considered incidental to various contract items and will not be paid for separately.
- The Contractor shall exercise extreme caution to preserve BENCHMARKS (Survey Monuments). Whenever the center of a Survey Monument is less than three (3) feet away from the edge of construction, the Contractor shall retain a Licensed Land Surveyor to reference the location of said survey monument.
- Benchmarks that are disturbed or destroyed shall be restored under a licensed Land Surveyor's direction. Copies of field notes, descriptions and new values of the replaced Benchmark shall be sent to the Department of Transportation, Highways Division, Cadastral Engineering Section, for review and approval before commencement of construction.
- The Contractor is reminded to call the Hawaii One Call Center at (866) 423-7287 prior to starting any excavation work.
- The Contractor shall indemnify and be solely responsible for the protection of adjacent properties, utilities and existing structures from damages due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.
- The Contractor shall observe and comply with the administrative rules of The Department of Health regarding noise control of Oahu.
- No section of incomplete guardrail, footing and/or excavation shall be left unshielded at the end of each work day. Intermediate concrete barrier sand crash cushion end treatments used for shielding shall meet current State of Hawaii Department of Transportation standards and guidelines along with manufacturer's specifications. All shielding used during construction shall be considered incidental to various guardrail items.
- All work specified in the Contract but not listed separately in the proposal schedule shall be considered incidental to the various contract items and shall not be paid for separately.

DATE	BY
REVISION	BY
NO. 1	DATE
NO. 2	DATE
NO. 3	DATE
NO. 4	DATE
NO. 5	DATE
NO. 6	DATE
NO. 7	DATE
NO. 8	DATE
NO. 9	DATE
NO. 10	DATE



ALISON M. MUEHANNA
LICENSED PROFESSIONAL ENGINEER
NO. 6975-C
HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES & LEGEND - 1

KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Uluaa Street and Ulumanu Drive
Project No. 61D-01-23

Scale: N/A Date: DEC, 2023

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

P:\Land Projects\DOT\DOT - 2022\Traffic Operations\Task\PA02\Kailua\TMS\9\FSDrawing\03 General Notes & Legend - 1.dwg, 12/6/2023 9:25:20 AM

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	4	87

CONSTRUCTION NOTES FOR WORK WITHIN CITY RIGHT-OF-WAY

- All applicable construction work shall be done in accordance with the Standard Specifications for Public Works Construction, September 1986 and Standard Details for Public Works Construction, September 1984, as amended, of the Department of Public Works, City and County of Honolulu and the Counties of Kauai, Maui and Hawaii.
- The underground pipes, cables or ductlines known to exist by the Engineer from his search of records are indicated on the plans. The Contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines.
- No Contractor shall perform any construction operation so as to cause falling rocks, soil or debris in any form to fall, slide or flow into existing City drainage systems, adjoining properties, streets, or natural watercourses. Should such violations occur, the Contractor may be cited and the Contractor shall immediately make any remedial actions necessary.
- The General Contractor/Developer/Owner of the project shall be responsible for conformance with applicable provisions of the Hawaii Administrative Rules, Title 11, Chapter 54, "Water Quality Standards," and Title 11, Chapter 55, "Water Pollution Control", as well as Chapter 14 of the Revised Ordinances of Honolulu, as amended. Best Management Practices shall be employed at all times during construction.

The General Contractor/Developer/Owner of the project shall obtain National Pollutant Discharge Elimination System (NPDES) Permit coverage(s) for the following:
 - Storm water discharges associated with construction activities that disturb one (1) acre or more, and
 - Discharges of hydrotesting effluent, dewatering effluent, and well drilling effluent to State waters.

In accordance with State law, all discharges related to project construction or operations are required to comply with State Water Quality Standards (Hawaii Administrative Rules, Chapter 11-54). Best Management Practices shall be used to minimize or prevent the discharge of sediment, debris, and other pollutants to State waters. Permit coverage is available from the Department of Health, Clean Water Branch at <http://health.hawaii.gov/cwb>. The Owner/Developer/Contractor is responsible for obtaining other Federal, State, or local authorizations as required by law.
- For non-City projects, the Contractor shall notify the Civil Engineering Branch, D.P.P. at 768-8084 to arrange for inspectional services and submit two (2) sets of approved Construction Plans seven (7) days prior to commencement of construction work. For City projects, the Contractor shall coordinate inspectional services with the responsible City agency.
- For non-City projects, the Contractor may submit a substitution request to precast any City owned and/or maintained drainage structure (ex., catch basins, drain manholes, drain inlets, culverts, etc). However, prior to construction and installation of any precast structure, the Contractor shall a) submit six (6) sets of shop drawings to the Civil Engineering Branch, Department of Planning and Permitting and obtain written approval and b) notify the Civil Engineering Branch, Department of Planning and Permitting at 768-8084 to arrange for inspectional services. Non-compliance with any of these requirements shall mean immediate suspension of all precast construction work and rejection of all precast structures already constructed.


For City projects, the Contractor shall submit shop drawings to the responsible City agency for review and approval. Also, the Contractor shall coordinate inspectional services with the responsible City agency.
- Confined Space

For entry by City personnel, including inspectors, into a permit required confined space as defined in 29 CFR Part 1910.146(b), the Contractor shall be responsible for providing:
 - All safety equipment required by the confined space regulations applicable to all parties other than the construction industry, to include, but not limited to, the following:
 - Full body harnesses for up to two personnel.
 - Lifeline and associated clips.
 - Ingress/egress and fall protection equipment.
 - Two-way radios (walkie-talkies) if out of line-of-sight.
 - Emergency (escape) respirator (10 minute duration).
 - Cellular telephone to call for emergency assistance.
 - Continuous gas detector (calibrated) to measure oxygen, hydrogen sulfide, carbon monoxide and flammables (capable of monitoring at a distance of least 20-feet away.)
 - Personal multi-gas detector to be carried by inspector.
 - Continuous forced air ventilation adequate to provide safe entry conditions.
 - One attendant/rescue personnel topside (two, if conditions warrant it).
- Pursuant to Chapter 6E, HRS, in the event any artifacts or human remains are uncovered during construction operations, the Contractor shall immediately suspend work and notify the Honolulu Police Department, and the State Department of Land and Natural Resources-Historic Preservation Division (692-8015). In addition, for non-City projects, the Contractor shall inform the Civil Engineering Branch, Department of Planning and Permitting (768-8084); and for City projects, notify the responsible City agency.
- For projects abutting State Highways' rights-of way, the Owner or his authorized representative shall notify the State Department of Transportation, Highways Division, Oahu District, Drainage Discharge Unit at 831-6793 for an assessment of State Highways permit requirements.
- For Bench Mark, see Sheet 13.

ORIGINAL PLAN	DATE
REVISED BY	
DATE	
REVISION	
DATE	
CHECKED BY	
DATE	

APPROVED:

DATE

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	SHEET No. 2 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	6	87

HAWAII ONE CALL CENTER

- Before conducting any excavation in the public right of way or on private property, call the Hawaii One Call Center at least five (5) working days before planning to dig. Be sure to give them the address and location of the nearest cross street(s) near where digging is planned.

Call 811 toll-free 24 hours a day.
For more information, go to www.callbeforeyoudig.org

- The Hawaii One Call Center will contact all utility companies to tone, mark or identify the location of their underground utilities for free. Mark the area where Contractor plans to excavate in white and label all of the other utilities as listed below.

RED Electric power lines, cables, or conduits, and lighting cables.
YELLOW Gas, oil, steam, petroleum or other hazardous liquid or gaseous materials.
ORANGE Communications, cable TV, alarm or signal lines, cables, or conduits.
BLUE Water, irrigation, and slurry lines.
GREEN Sewers, storm sewer facilities or other drain lines.
WHITE Proposed excavation.
PINK Temporary survey markings.
PURPLE Reclaimed water, irrigation and slurry lines.

PUBLIC HEALTH, SAFETY, AND CONVENIENCE NOTES

- The Contractor shall observe and comply with all Federal, State, and Local laws required for the protection of public health and safety and environmental quality.
- The Contractor, at his own expense, shall keep the project and its surrounding areas free from dust nuisance. The work shall be in conformance with the air pollution control standards and regulations of the State Department of Health. The City may require supplementary measures as necessary.
- No Contractor shall perform any trenching operation so as to cause falling rocks, soil or debris in any form to fall, slide or flow into adjoining properties, streets or natural water-courses. Should such violations occur, the cost incurred shall be borne by the Contractor. For any remedial action by the Director, HDOT shall be payable by the Contractor.
- The Contractor shall provide, install and maintain all necessary signs, lights, flares, barricades, markers, cones, and other protective facilities and shall take all necessary precautions for the protection, convenience, and safety of the public. The Contractor shall apply for a construction permit with a noise pollution control plan if work should extend beyond permitted working hours.


ARCHAEOLOGICAL NOTES

- In the event that an archaeological or historic structure within the work area is inadvertently damaged during construction, cease work in the vicinity of the site and notify the Engineer and the State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources of the damage. SHPD will determine the appropriate mitigation measures.
- In the event that a previously unknown archaeological feature is exposed by construction, cease work in the vicinity of the new feature and notify the Engineer and SHPD of the new discovery.
- In the event that previously unknown human remains are exposed by construction, cease all work in the area of the remains, and protect the area with an appropriate material. Notify the Engineer and SHPD at 692-8015.
- If human remains are discovered, HAR Title 13, Subtitle 13, Chapter 300 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the State Historic Preservation Division and the Police Department will be contacted. The appropriate process would then proceed in conformance with HAR 13-300 Subchapter 4, "Procedures for Proper Treatment of Burial Sites and Human Skeletal Remains."
- If any lava tube or coral cavern is uncovered during earthwork operations, the Contractor shall cease all ground work in the area and immediately notify the Archaeological Monitor and the Engineer. With or without the help of the Archaeological Monitor, the Engineer will assess the situation. If the Engineer has any doubts as to the extent and/or significance of the discovery, the Engineer will contact the appropriate regulatory agency (e.g., State Historic Preservation Division).

LEGEND

	Reconstruction Areas	—A-12—	Existing Sewer Line
	Leveling Areas	—S-12—	New 12" Sewer Line
	Cold Planing Areas	o _{smh}	Existing Sewer Manhole
	Resurfacing Limits	•SMH	Adjusted Sewer MH Frame/Cover
—e—	Existing Electrical Line	•SMH	New Sewer Manhole
—E—	New Electrical Line	—g-6—	Existing 6" Gas Line
o _{fp}	Existing Joint Pole	—G-6—	New 6" Gas Line
o _{gp}	Existing Power Pole	o _{gv}	Existing Gas Valve Box
o _{emh}	Existing Electric Manhole	•GV	Adjusted Gas Valve Box
•EMH	Adjusted Elec. MH Frame/Cover	•GV	New Gas Valve Box
•EMH	New Electric Manhole	o _{gmh}	Existing Gas Manhole
—t—	Existing Telephone Line	•GMH	Adjusted Gas MH Frame/Cover
—T—	New Telephone Line	•GMH	New Gas Manhole
o _{tp}	Existing Telephone Pole	•mon	Existing Monument
o _{tmh}	Existing Telephone Manhole	•MON.	Adjusted Monument
•TMH	Adjusted Tele. MH Frame/Cover	•MON.	New Monument
•TMH	New Telephone Manhole	—d-24—	Existing 24" Drain Line
—ac—	Existing Signal Corps Line	—24" RCP	New 24" RCP Drain Line
—SC—	New Signal Corps Line	o _{admh}	Existing Storm Drain Manhole
—tv—	Existing TV Cable	•SDMH	Adjusted Storm Drain MH Frame/Cover
—TV—	New TV Cable	•SDMH	New Storm Drain Manhole
—w-12—	Existing 12" Water Line	g _{di}	Existing Grated Drop Inlet
—W-12—	New 12" Water Line	cb	Existing Catch Basin
o _{wmh}	Existing Water Manhole	cb	Existing Traffic Sign
•WMH	Adjusted Water MH Frame/Cover	h	Existing Highway Lighting Standard
•WMH	New Water Manhole	h _{lpb}	Existing Highway Lighting Pullbox
o _{av}	Existing Water Air Valve	o _{tsp}	Existing Traffic Signal Pole
•AV	Adjusted Water Air Valve	•TSP	New Traffic Signal Pole
•AV	New Water Air Valve	h _{tspb}	Existing Traffic Signal Pullbox
o _{wrv}	Existing Water Valve Box	h _{tspb}	Adjusted Traffic Signal Pullbox
•WV	Adjusted Water Valve Box	h _{tspb}	New Traffic Signal Pullbox
•WV	New Water Valve Box	g _g	Existing Metal Guardrail
g _{wm}	Existing Water Meter	g _g	New Metal Guardrail
g _{wm}	Adjusted Water Meter		
g _{wm}	New Water Meter		
h _{fh}	Existing Fire Hydrant		
h _{fh}	New Fire Hydrant		

ORIGINAL PLAN	DATE
REVISED BY	DATE
NOTED BY	DATE
CHECKED BY	DATE


 <p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24</p>	<p>STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION</p> <p>GENERAL NOTES & LEGEND - 4</p> <p>KAILUA ROAD INTERSECTION IMPROVEMENTS Vicinity of Ulukou Street and Ulumani Drive Project No. 61D-01-23</p> <p>Scale: N/A Date: DEC, 2023</p>
	<p>SHEET No. 4 OF 5 SHEETS</p>

**GENERAL CONTRACTOR'S NOTES
(SPECTRUM):**

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	7	87

1. The contractor shall procure and pay for all licenses and permits and shall give all notices necessary and incident to the due and lawful prosecution of the work.
2. The locations of existing utilities are approximate only. The contractor shall verify their locations and shall be responsible for any damages to these utilities as a result of their operations. Adjustments to the new ductline alignment, if required, shall be made to provide the required clearances.
3. The contractor shall brace all poles or light standards near the new ductline, manhole or handhole during its operations.
4. The contractor shall saw-cut A.C. pavement, concrete gutter, and concrete sidewalk wherever new manholes, handholes, pullboxes or ductlines are to be placed and shall restore to existing condition or better.
5. The underground pipes, cables, or ductlines known to exist by the engineer from their search of records are indicated on the plans. The contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the areas. Wherever connections of new utilities to existing utilities are shown on the plans, the contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines.
6. The contractor, at their own expense, shall keep the project and surrounding area free from dust nuisance. The cost for supplementary measures, which will be required by the City and County of Honolulu, shall be born by the contractor.
7. The contractor, at their own expense, shall keep the project area free from dust nuisance. The work shall be in conformance the air pollution control standards and regulations of the State of Hawaii, Department of Health.
8. Prior to the excavation of the ductline, the contractor shall request that Spectrum to locate existing ductline wherever required.
9. The contractor shall take necessary precaution not to damage existing cables or ducts. Any work involving existing cables or ducts shall be done in the presence of the Spectrum inspector or their representative. Temporary cable and duct support shall be provided wherever necessary.
10. The contractor shall notify the Spectrum inspector 72 hours prior to the start of work on CATV infrastructure, pouring concrete, or backfilling. Spectrum's inspector(s): Perry Samuella at 387-2496 or Paul Caspillo at 479-1637.
11. Wherever connections to existing utilities are shown on the plans, the contractor shall expose the existing lines prior to excavation of the main trenches to verify their locations and depths
12. Contractor shall provide all materials and furnish all labor and equipment necessary to install the ductline in place complete.
13. The contractor shall be responsible for laying out all required lines and grades and shall preserve all bench marks and working points necessary to lay out the work correctly. The new ductline shall be adjusted by the contractor to suit the existing conditions and the details as described in the plans.
14. The locations of CATV facilities shown on plans are from existing records with varying degrees of accuracy as to its actual fixed location. The contractor shall use extreme caution when working in close proximity of CATV facilities.
15. The contractor shall obtain excavation permit clearance from Spectrum's engineering section located at 200 Akamaiui St, Millard Tech Park.
16. For any field assistance or verification of CATV facilities, the contractor shall call Spectrum Engineering and Construction Services at 625-8570 or email: HAW.ENGINEERING.RESEARCH@CHARTER.COM
17. Any work required to relocate CATV facilities shall be done by Spectrum and the contractor shall be responsible for all coordination requirements and associated costs.
18. Any damage to Spectrum's facilities shall be reported to Spectrum's TOC department at 625-8169.
19. All existing improvements that are disturbed during the construction phase shall be restored to its original or better condition at no cost to the State of Hawaii in accordance with the State's standards.
20. Smooth finish inside wall of existing pullboxes and hand-holes to its original condition or better.
21. Penetration into pullboxes if necessary to be from factory installed opening or from factory installed opening or from bricks position. Penetration from pullbox walls is not acceptable.
22. Bends in the duct alignment, due to changes in grade shall have a minimum radius of 20-feet. All 90-degree C-bends at a pole or at the building floor slab penetration, shall have a bend radius of 10 times the diameter of the duct or greater.
23. Minimum length of conduit used shall not be less than 5-feet in length. Use of partial conduit sections allowable is at Spectrum inspector(s) discretion.
24. All conduits shall enter through the end "short wall" of the pullbox. Entry shall be at 90-degrees (perpendicular) to wall face with bends no less than 12" from exterior wall.
25. At no time shall cement mortar, wood, or any other material be used between precast sections.
26. Leveling or raising of boxes to grade must be done:
 - A. pre-cast base(s) - using gravel layer under base (type 3b or equivalent approved by spectrum oceanic inspector)
 - B. brick base(s) - adjustments to brickwork section. the permanent installation of wooden wedges to accomplish this purpose will not be accepted.
27. Trenching to be conducted by hand digging near and across existing utility lines.
28. Minimum clearance between street light stand and fire hydrants shall be three feet.
29. Underground utilities shown hereon is for information only. no guarantee is made on the accuracy or completeness of said installation.
30. For underground cable locating and marking, five working days advance notice is required. Three working days advance notice is required for any inspection by a designated representative. contractor shall take necessary precaution not to damage any existing cables or ducts. Spectrum's inspector or designated representative is required to be at any job site whenever there will be a breakage into or entry into any structure that contain spectrum oceanic's facilities.
31. After ductline has been completed, a mandrel with a square front not less than 12-inch long and having a diameter of $5\frac{1}{8}$ -inch less than the inside diameter of duct, shall be pulled through each duct after which a brush with stiff bristles shall be pulled through to make certain that no particles of earth, sand, or gravel have been left inside. Ducts shall be completely dry and clean.
32. Contractor and/or customer shall provide Spectrum with sufficient installation time in their occupancy time table.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES & LEGEND - 5

KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Ulukou Street and Ulumani Drive
Project No. 61D-01-23

Scale: N/A Date: DEC, 2023

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WATER POLLUTION & EROSION CONTROL NOTES

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	8	87

A. GENERAL:

- See Special Provisions Section 209 - Water Pollution and Erosion Control. Section 209 describes but is not limited to: submittal requirements; scheduling of a water pollution and erosion control conference with the Engineer; construction requirements; method of measurement; and basis of payment. In addition, Appendix A lists potential pollutant sources and corresponding BMPs used to mitigate the pollutants.
- Follow the guidelines in the current HDOT Construction Best Management Practices Field Manual in developing, installing and maintaining the Best Management Practices (BMP) for the project. For any conflicting requirements between the Manual and applicable bid documents, the applicable bid documents will govern. Should a requirement not be clearly described within the applicable bid documents, the Contractor shall notify the Engineer immediately for interpretation. For the purposes of clarification under Note A2, "applicable bid documents" include the construction plans, standard specifications, Special Provisions, Permits, and the Storm Water Pollution Prevention Plan (SWPPP) when applicable.
- Follow the guidelines in the Honolulu's City & County "Rules Relating to Soil Erosion Standards and Guidelines" along with applicable Soil Erosion Guidelines for projects on Maui, Molokai, Kauai, and Hawaii.
- The Engineer may assess liquidated damages of up to \$27,500 for non-compliance of each BMP requirement and each requirement stated in Section 209 and special provisions, for every day of non-compliance. There is no maximum limit on the amount assessed per day.
- The Engineer will deduct the cost from the progress payment for all citations received by the Department for non-compliance, or the Contractor shall reimburse the State for the full amount of the outstanding cost incurred by the State.
- If necessary, install a rain gauge prior to any field work including the installation of any site-specific best management practices. The rain gauge shall have a tolerance of at least 0.05 inches of rainfall. Install the rain gauge on the project site in an area that will not deter rainfall from entering the gauge opening. Do not install in a location where rain water may splash into rain gauge. The rain gauge installation shall be stable and plumbed. Do not begin field work until the rain gauge is installed and site-specific best management practices are in place.
- Submit Storm Water Pollution Prevention Plan to the Engineer along with a completed Site-Specific BMP Review Checklist within 30 calendar days of contract execution. The Site-Specific BMP Review Checklist may be obtained from <http://www.stormwaterhawaii.com>.

B. WASTE DISPOSAL:

- Waste Materials**
 Collect and store all waste materials in a securely lidded metal dumpster or roll off container with cover to keep rain out or loss of waste during windy conditions. The dumpster shall meet all local and State solid waste management regulations. Deposit all trash and construction debris from the site in the dumpster. Empty the dumpster weekly or when the container is two-thirds full, whichever is sooner. Do not bury construction waste materials onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Post notices stating these practices in the

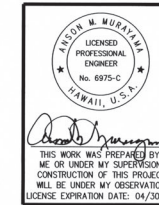
office trailer, on a weatherproof bulletin board, or other accessible location acceptable to the Engineer. The Contractor shall be responsible for seeing that these procedures are followed. Submit the Solid Waste Disclosure Form for Construction Sites to the Engineer within 21 calendar days of date of award. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer monthly. This should also include documentation from any intermediary facility where solid waste is handled or processed.

- Hazardous Waste**
 Dispose all hazardous waste materials in the manner specified by local, or State regulations and by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.
 - Sanitary Waste**
 Collect all sanitary waste from the portable units a minimum of once per week, or as required. Position sanitary facilities where they are secure and will not be tipped over or knocked down.
- C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

- For projects with an NPDES Permit for Construction Activities, inspect at the following intervals. For construction areas discharging to nutrient or sediment impaired waters, inspect all control measures at least once each week and within 24 hours of any rainfall event of 0.25 inches or greater within a 24 hour period. For construction areas discharging to waters not impaired for nutrient or sediments, inspect all control measures weekly. Inspections are only required during the project's normal working hours. The discharge point water classification may be found in the SWPPP.
- For projects without an NPDES Permit for Construction Activities, inspect all control measures weekly.
- Maintain all erosion and sediment control measures in good working order. If repair is necessary, initiate repair immediately and complete by the close of the next work day if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance. When installation of a new erosion or sediment control or a significant repair is needed, install the new or modified control or complete the repair no later than 7 calendar days from the time of discovery. "Immediately" means the Contractor shall take all reasonable measures to minimize or prevent discharge of pollutants until a permanent solution is installed and made operational. If a problem is identified at a time in the day in which it is too late to initiate repair, initiation of repair shall begin on the following work day.
- Remove built-up sediment from silt fence when it has reached one-half the height of the fence. Remove sediment from other perimeter sediment control devices when it has reached one-half the height of the device.
- Inspect silt screen or fence for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground. Inspect and verify the bottom of the silt screen is buried a minimum of 6 inches below the existing ground.
- Inspect temporary and permanent seeding and planting for bare spots, washouts and healthy growth.

- Complete and submit to the Engineer a maintenance inspection report within 24 hours after each inspection.
- Provide a stabilized construction entrance at all points of exit onto paved roads to reduce vehicle tracking of sediments. Include stabilized construction entrance in the Water Pollution, Dust, and Erosion Control submittals. Minimum length should be 50 feet. Minimum width should be 30 feet. Minimum depth should be 12 inches or as recommended by the soils engineer and underlain with geo-textile fabric. If minimum dimensions cannot be met, provide other stabilization techniques that remove sediment prior to exit. Clean the paved street adjacent to the site entrance daily or as required to remove any excess mud, cold-planned materials, dirt or rock tracked from the site. Do not hose down the street without containing or vacuuming wash water. Cover dump trucks hauling material from the construction site with a tarpaulin. Remove sediment tracked onto the street, sidewalk, or other paved area by the end of the day in which the track-out occurs.
- Include designed Concrete Washout Area(s) in the Water Pollution, Dust, and Erosion Control submittals.
- Submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.
- Personnel selected for the inspection and maintenance responsibilities shall receive training from the Contractor. They shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.
- Contain, remove and dispose slurry generated from saw cutting of pavement in accordance with approved BMP practices. Do not allow discharge into the drainage system or State waters.
- For projects with an NPDES Permit for Construction Activities, immediately initiate stabilizing exposed soil areas upon completion of earth-disturbing activities for areas where earth-disturbing activities have permanently or temporarily ceased. Earth-disturbing activities have permanently ceased when clearing and excavation within any area of the construction site that will not include permanent structures has been completed. Earth-disturbing activities have temporarily ceased when clearing, grading, and excavation within any area of the construction site that will not include permanent structures will not resume (i.e., the land will be idle) for a period of 14 calendar days, but such activities will resume in the future. For construction areas discharging into waters not impaired for nutrients sediments, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities. For construction areas discharging into nutrient or sediment impaired waters, complete initial stabilization within 7 calendar days after the temporary or permanent cessation of earth-disturbing activities. Classification of water at the discharge point may be found in the SWPPP.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES - 1

KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Ulukou Street and Ulumani Drive
Project No. 61D-01-23

Scale: N/A Date: DEC, 2023

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WATER POLLUTION & EROSION CONTROL NOTES (CONT'D)

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	9	87

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

1. Materials Pollution Prevention Plan

- a. Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory.

Concrete	Cleaning Solvents
Detergents	Wood
Paints (enamel and latex)	Masonry Block
Metal Studs	Herbicides and Pesticides
Tar	Curing Compounds
Fertilizers	Adhesives
Petroleum Based Products	

- b. Use Material Management Practices to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. Make an effort to store only enough product as is required to do the job.
- c. Store all materials stored onsite in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.
- d. Keep products in their original containers with the original manufacturer's label.
- e. Do not mix substances with one another unless recommended by the manufacturer.
- f. Whenever possible, use a product up completely before disposing of the container.
- g. Follow manufacturer's recommendations for proper use and disposal.
- h. Conduct a daily inspection to ensure proper use and disposal of materials onsite.
2. Hazardous Material Pollution Prevention Plan:
- a. Keep products in original containers unless they are not resealable.
- b. Retain original labels and Safety Data Sheets (SDS), formerly Material Safety Data Sheets (MSDS).
- c. Dispose of surplus products according to manufacturer's instructions and local and State regulations.

3. Onsite and Offsite Products Specific Plan

The following product specific practices shall be followed onsite:

- a. **Petroleum Based Products:**
Monitor all onsite vehicles for leaks and perform regular preventive maintenance to reduce the chance of leakage. Store petroleum products in tightly sealed containers which are clearly labeled. Apply asphalt substances used onsite according to the manufacturer's recommendation.
- b. **Fertilizers:**
Apply fertilizers used only in the minimum amounts recommended by the manufacturer and federal, state, and local requirements. Avoid applying just before a heavy rain event. Apply at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth. Once applied, work fertilizer into the soil to limit exposure to storm water. Do not apply to storm conveyance channels with flowing water. Storage shall be in a covered shed or in an area where fertilizer will not come into contact with precipitation or stormwater. Transfer the contents of any partially used bags of fertilizer to a sealable plastic bin to avoid spills.

c. Paints:

Seal and store all containers when not required for use. Do not discharge excess paint to the drainage system, sanitary sewer system, or State waters. Dispose properly to manufacturers' instructions and State and local regulations.

d. Concrete Trucks:

Washout or discharge concrete truck drum wash water only at a designated site as far as practicable from storm drain inlets or State waters. Do not discharge water in drainage system or State waters. Disposal by percolation is prohibited. Clean disposal site as required or as requested by the Engineer.

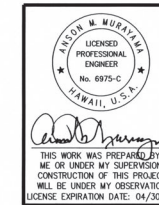
4. Spill Control Plan:

- a. Post a spill prevention plan to include measures to prevent and clean up each spill.
- b. The Contractor shall be the spill prevention and clean-up coordinator. Designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. Post the names of responsible spill personnel in the material storage area on a weatherproof bulletin board or other accessible location acceptable to the Engineer and in the office trailer onsite.
- c. Clearly post manufacturer's recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of information and cleanup supplies.
- d. Keep ample materials and equipment necessary for spill cleanup in the material storage area onsite.
- e. Clean up all spills immediately after discovery.
- f. Keep the spill area well ventilated. Personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- g. Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size. Where a leak, spin, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, the Contractor shall notify the Engineer as soon as the Contractor has knowledge of the discharge. The Engineer will notify the National Response Center (NRC) at (800) 424-8802, the Clean Water Branch during regular business hours at 586-4309, and the Hawaii State Hospital Operator at 247-2191 and the Clean Water Branch (DOH-CWB) via email at cleanwaterbranch@doh.hawaii.gov during non-business hours immediately. The Contractor shall also provide to the Engineer within 7 calendar days of knowledge of the release, a description of the release, the circumstances leading to the release, and the date of the release. The Engineer will provide this information to the DOH-CWB. The Engineer will provide information to the NRC if requested.

E. PERMIT REQUIREMENTS:

1. The calculated land disturbance area for this project based on the construction plans is 0.60 acres not including the Contractor Staging and Storage areas. If the total of the disturbed area and the Contractor Staging and Storage area is one acre or greater, the Contractor shall obtain the NPDES Construction Activities Permit using HDOT's latest SWPPP template. See Hawaii Administrative Rules Chapter 11-55, Appendix C for the definition of land disturbance. The Contractor shall be responsible for obtaining the required NPDES Construction Activities Permit and complying with the requirements of HAR 11-55 including, but not limited to:
- Deadlines for initiating and completing initial stabilization
 - Increased inspection frequency and installation of rain gauge if applicable
 - Deadlines to initiate and complete repairs to BMPs
 - Reporting requirements and corrective action reports.
2. Comply with all applicable State and Federal Permit conditions. Permits may include, but no limited to the following:
- NPDES Permit for Construction Activities
 - NPDES Permit for Construction Dewatering
 - NPDES Permit for Hydrotesting Waters
 - Water Quality Certification
 - Stream Channel Alteration Permit
 - Section 404 Army Corps of Engineer Permit

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE	
SCALE	
DATE	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES - 2

KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Ulukou Street and Ulumani Drive
Project No. 61D-01-23

Scale: N/A Date: DEC, 2023

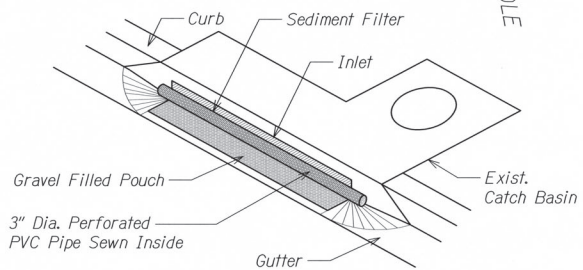
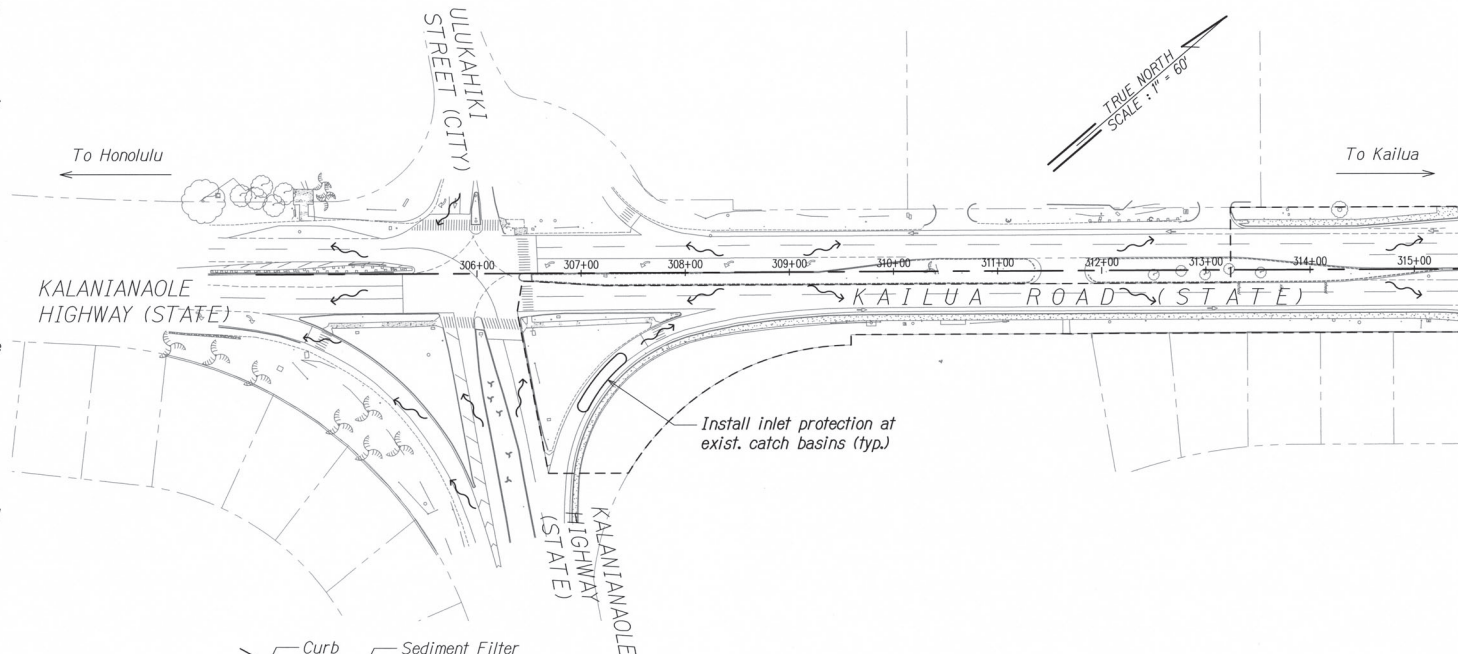
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	11	87

NOTES:

- Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMPs requirements and do not constitute an acceptable and/or complete Sediment and Erosion Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.01000, Installation, Maintenance, Monitoring, and Removal of BMP.

Compost Filter Sock Notes:

- Installation:
 - Installation shall be done according to the Manufacturer's recommendations.
 - Assemble by tying a knot at one end of the mesh sock, filling the sock with compost, and knotting the other end of the sock. A pneumatic blower may be used to fill the sock with compost.
 - For multi-sock use, place socks end-to-end and interlock the ends, or per manufacturer's recommended procedures, whichever is more stringent.
 - Anchor filter socks to ground; stakes shall be installed per the Manufacturer's recommendations. Where staking is not possible, heavy concrete blocks shall be used behind the filter sock for stabilization during rainfall events.
 - Turn ends of filter sock up slope to prevent flow around the ends.
- Material for compost berm may be left at the site and used as a soil amendment.
- Inspection & Maintenance:
 - Contractor shall inspect the filter sock(s) weekly during dry periods, daily during periods of prolonged rainfall, and within 24 hours of any rainfall event of 0.25 inch or greater that occurs within a 24-hour period.
 - The Contractor shall remove all accumulated sediment and debris from vicinity of filter sock(s) after each storm event. Remove sediment which has accumulated to within 1/3 of the berm height.
- If a severe storm is expected, remove inlet protection devices to prevent flooding on surrounding streets.

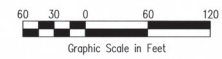


NOTES:

- The Contractor shall use best professional judgement (BPJ) to establish when inlet filters should be removed during times of above normal rainfall events to avoid threats to public health and/or safety. The Contractor shall use BPJ to establish when inlet filters should be replaced once the event has passed.
- To be installed at all existing catch basins adjacent and downstream of work areas.
- See this sheet and Sheet 12 for locations.

INLET PROTECTION AT CATCH BASINS

Not to Scale



LEGEND

- Direction of surface runoff
- Inlet protection
- Filter sock
- Limits of construction

DATE	BY	REVISION

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL PLAN - 1

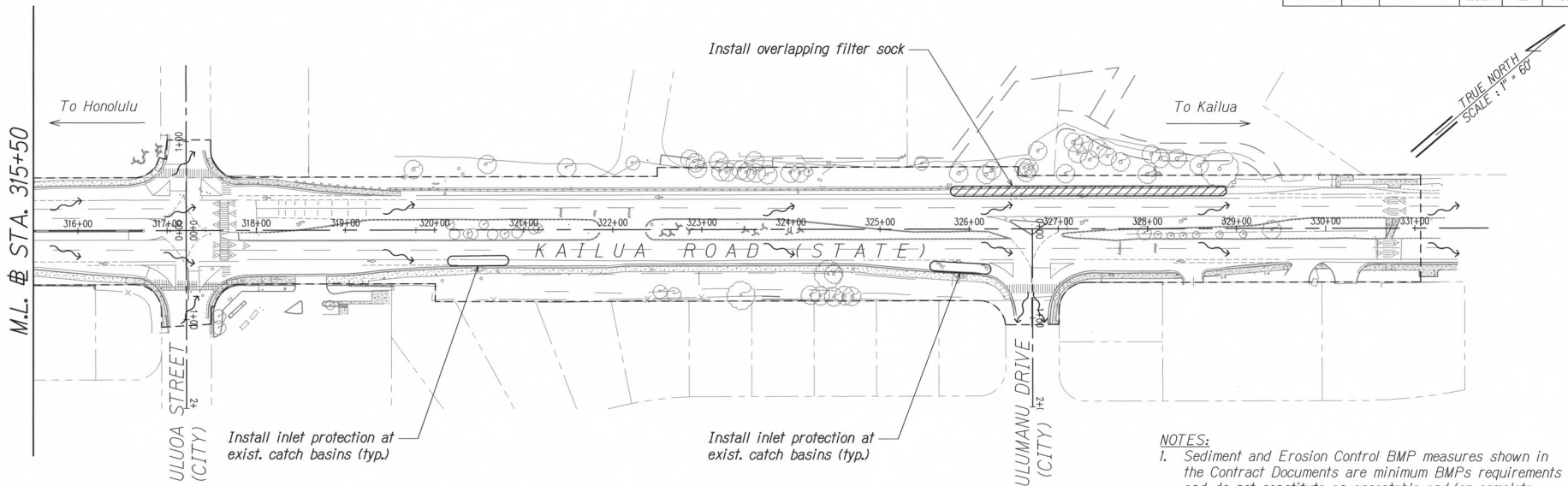
KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Ulukahi Street and Ulumani Drive
Project No. 61D-01-23

Scale: 1" = 60' Date: DEC, 2023

M.L. @ STA. 315+50

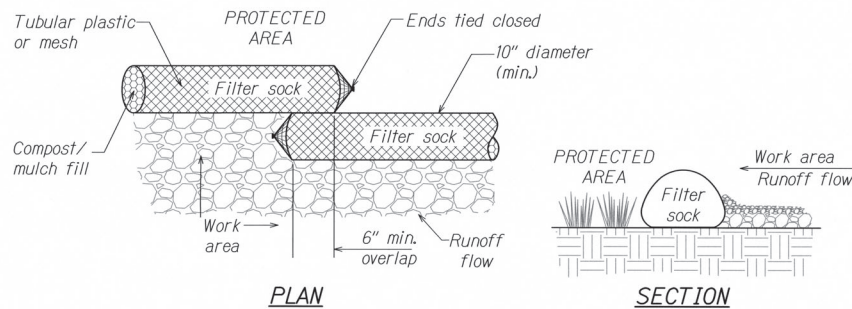
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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	12	87



NOTES:

- Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMPs requirements and do not constitute an acceptable and/or complete Sediment and Erosion Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit requirements. Cost shall be included in Pay Item 209.01000, Installation, Maintenance, Monitoring, and Removal of BMP.



NOTES:

- Sediment and debris at the sediment control filter shall be cleaned and removed weekly in dry periods and within 24 hr period during rainfall. Daily checking is necessary. The permittee shall maintain records of checks and removal of sediment and debris.
- During an event of above normal rainfall, the Contractor shall remove sediment filter and replace after event has passed.

OVERLAPPING FILTER SOCK DETAIL

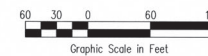
Not to Scale

1 / 12 / 12

LEGEND

- Direction of surface runoff
- Inlet protection
- Filter sock
- Limits of construction

DESIGNED BY	DATE
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APPROVED BY	
SCALE	
PROJECT NO.	
DATE	



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL PLAN - 2

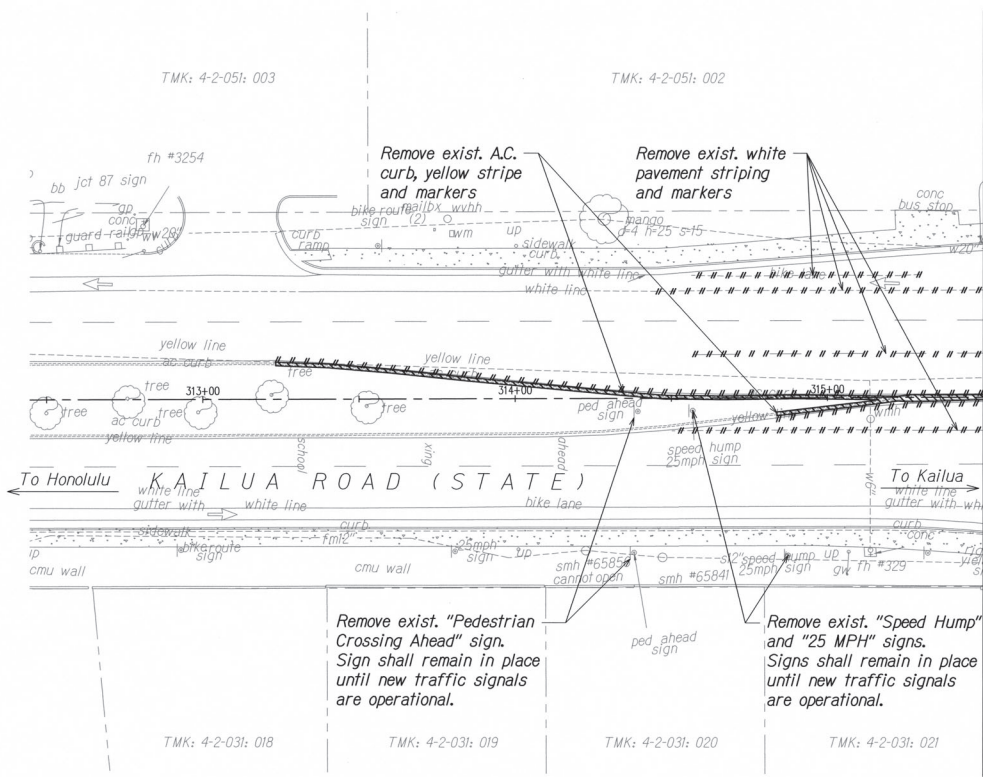
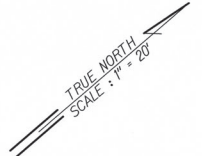
KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Ulua Street and Ulumanu Drive
Project No. 61D-01-23

Scale: 1" = 60'

Date: DEC, 2023

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	14	87

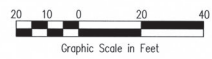


M.L. # STA. 315+50

LEGEND

- Concrete removal/limits
- Pavement removal/limits
- A.C. curb removal/limits
- Remove existing striping

DESIGNED BY	DATE
CHECKED BY	
IN CHARGE BY	
APPROVED BY	
DATE	



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

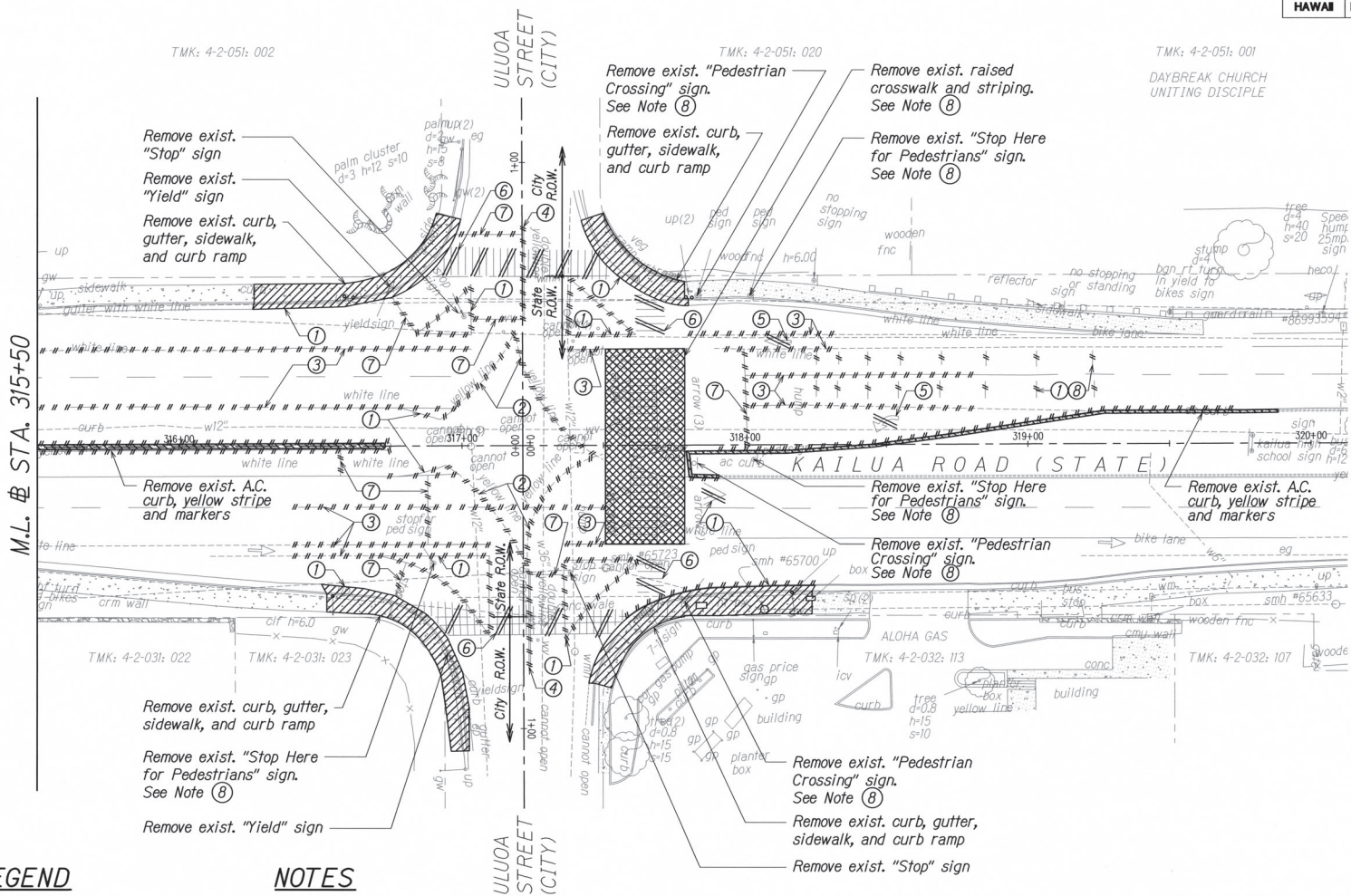
DEMOLITION PLAN - 1

KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Uluka Street and Ulumenu Drive
Project No. 61D-01-23

Scale: 1" = 20' Date: DEC, 2023

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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	15	87



TRUE NORTH
SCALE: 1" = 20'

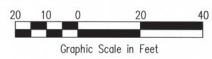
M.L. # STA. 315+50

LEGEND

- Concrete removal/limits
- Pavement removal/limits
- A.C. curb removal/limits
- Remove existing striping

NOTES

- ① Remove exist. white striping
- ② Remove exist. yellow striping
- ③ Remove exist. white striping and markers
- ④ Remove exist. double solid yellow stripe
- ⑤ Remove exist. pavement arrow
- ⑥ Remove exist. crosswalk
- ⑦ Remove exist. stop bar striping
- ⑧ Raised crosswalk, signs, and pavement markings shall remain in place until new traffic signals are operational



APPROVED:
DATE: _____

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE BY	

ARON M. MURAIWA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

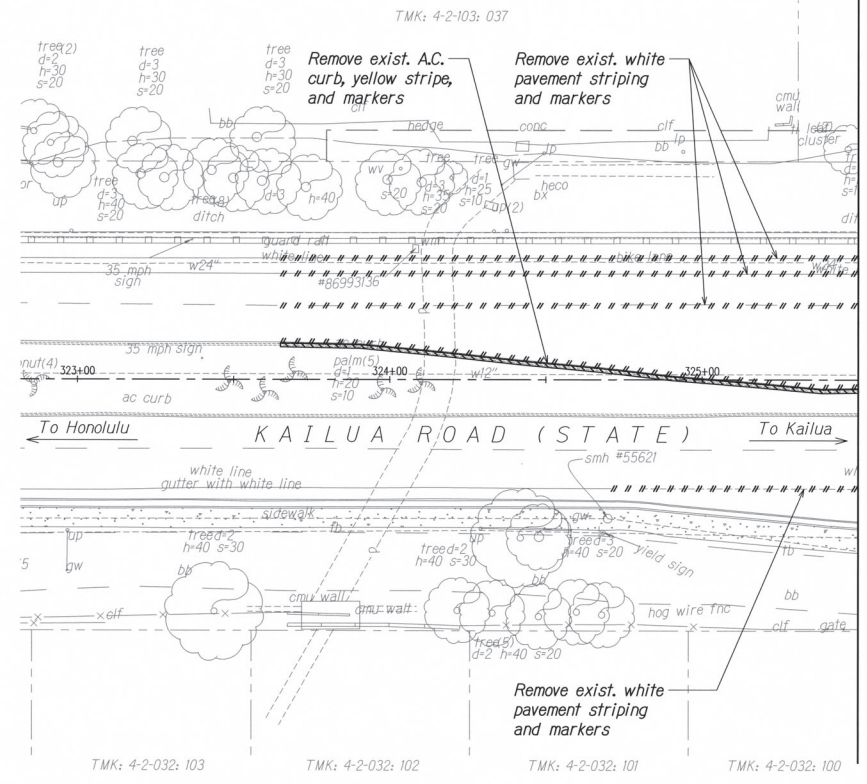
DEMOLITION PLAN - 2

KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Ulukoua Street and Ulukoua Drive
Project No. 61D-01-23

Scale: 1" = 20' Date: DEC, 2023

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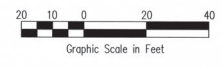


M.L. @ STA. 325+50

ORIGINAL	REVISED	DATE

LEGEND

- Concrete removal/limits
- Pavement removal/limits
- A.C. curb removal/limits
- Remove existing striping



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

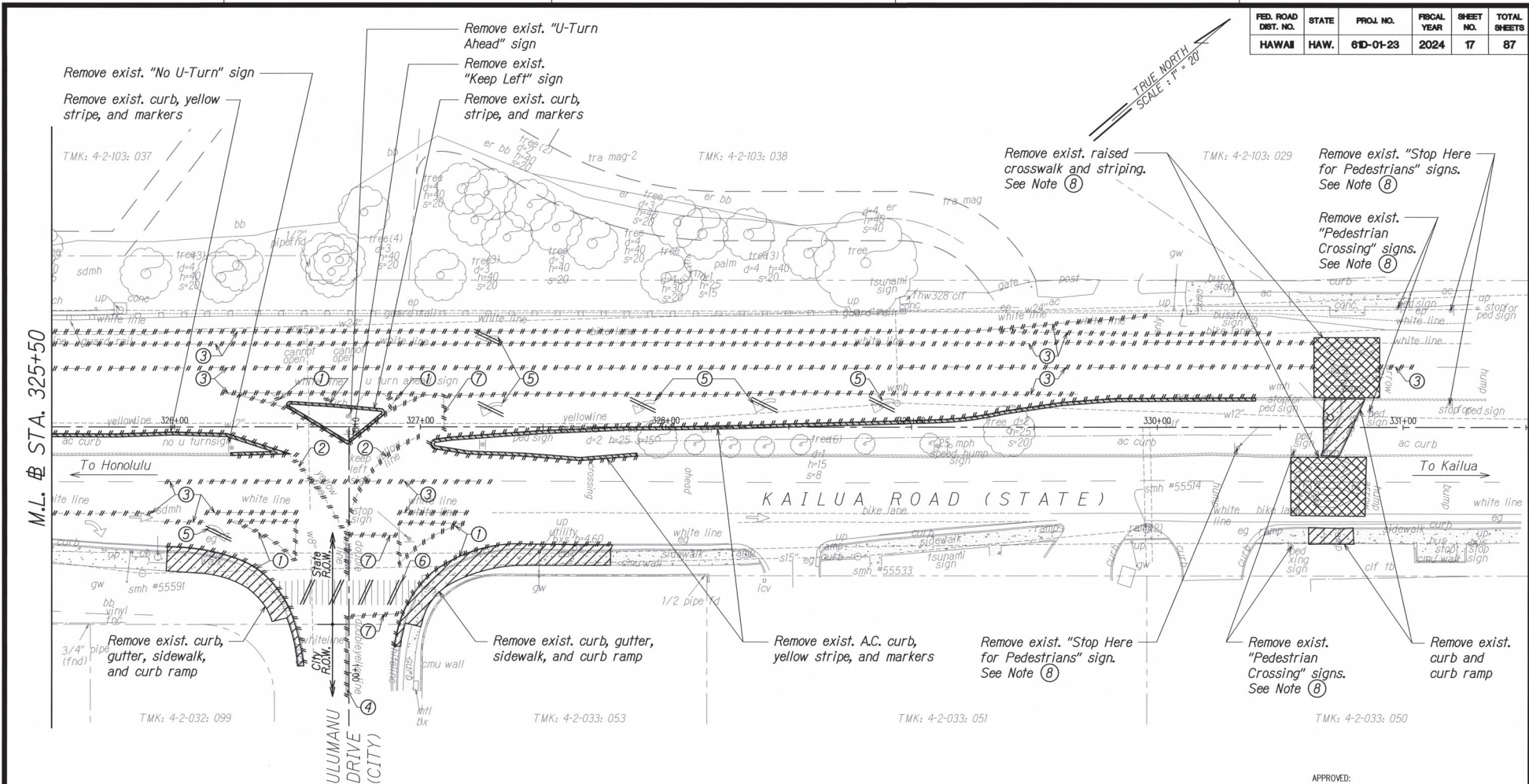
DEMOLITION PLAN - 3

KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Uluka Street and Ulumani Drive
Project No. 61D-01-23

Scale: 1" = 20' Date: DEC, 2023

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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	17	87



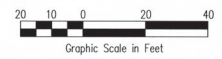
M.L. @ STA. 325+50

LEGEND

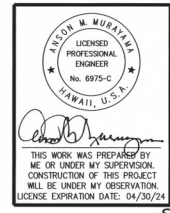
- Concrete removal/limits
- Pavement removal/limits
- A.C. curb removal/limits
- Remove existing striping

NOTES

- ① Remove exist. white striping
- ② Remove exist. yellow striping
- ③ Remove exist. white striping and markers
- ④ Remove exist. double solid yellow stripe
- ⑤ Remove exist. pavement arrow
- ⑥ Remove exist. crosswalk
- ⑦ Remove exist. stop bar striping
- ⑧ Raised crosswalk, signs, and pavement markings shall remain in place until new traffic signals are operational



APPROVED: _____
(SEE: ON LICENSEE'S SEAL, ETC. FOR EXPIRATION IN CITY BOOKS OF ANY DATE)



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

DEMOLITION PLAN - 4

KAILUA ROAD INTERSECTION IMPROVEMENTS
 Vicinity of Uluka Street and Ulumanu Drive
 Project No. 61D-01-23

Scale: 1" = 20' Date: DEC, 2023

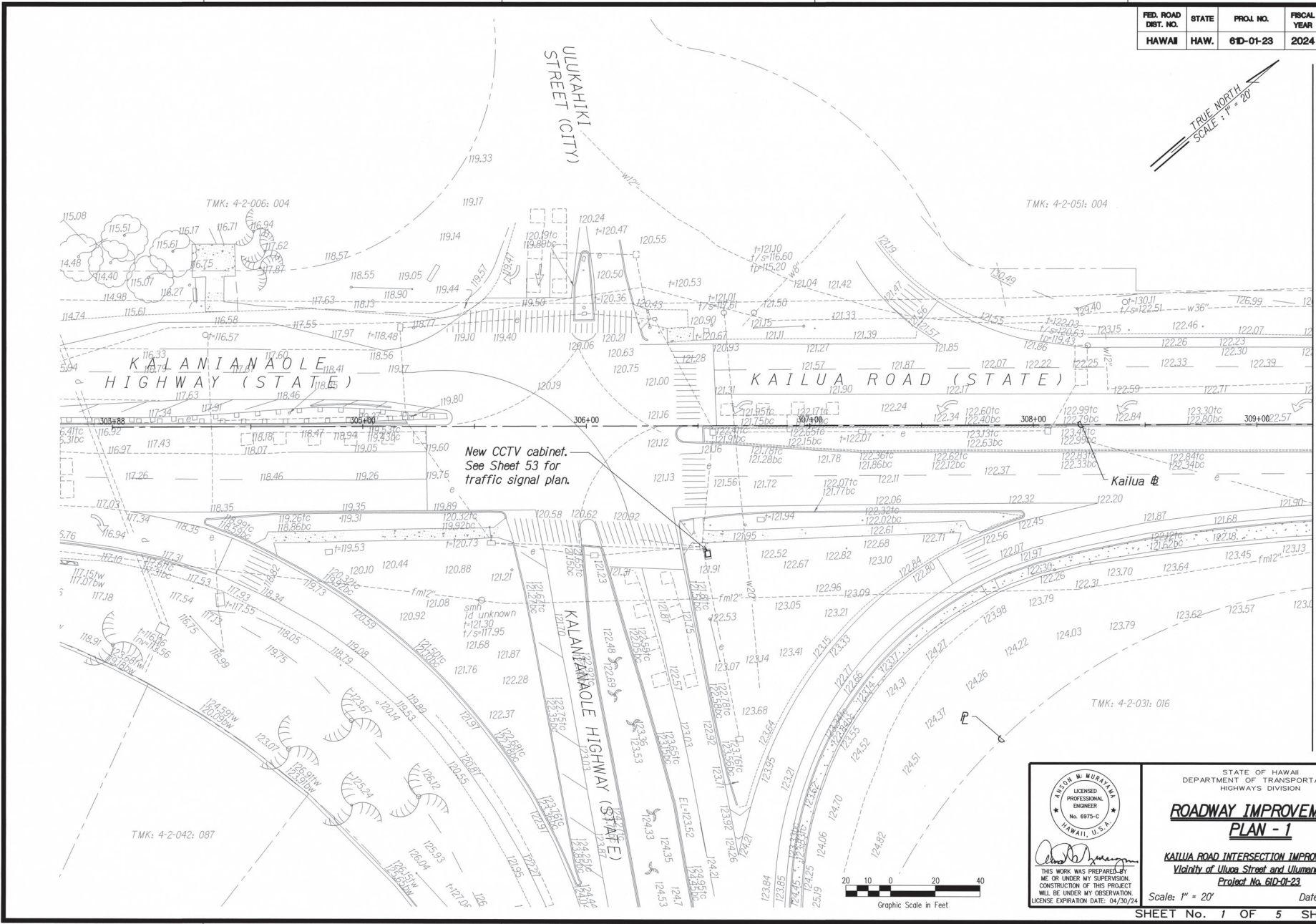
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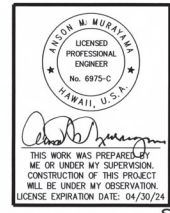
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	18	87



Match Line Kailua @ STA. 309+25



DATE	BY
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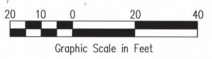


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**ROADWAY IMPROVEMENT
PLAN - 1**

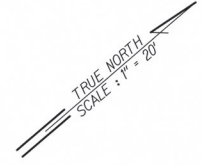
KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Ulukahi Street and Uluamuni Drive
Project No. 61D-01-23

Scale: 1" = 20' Date: DEC, 2023



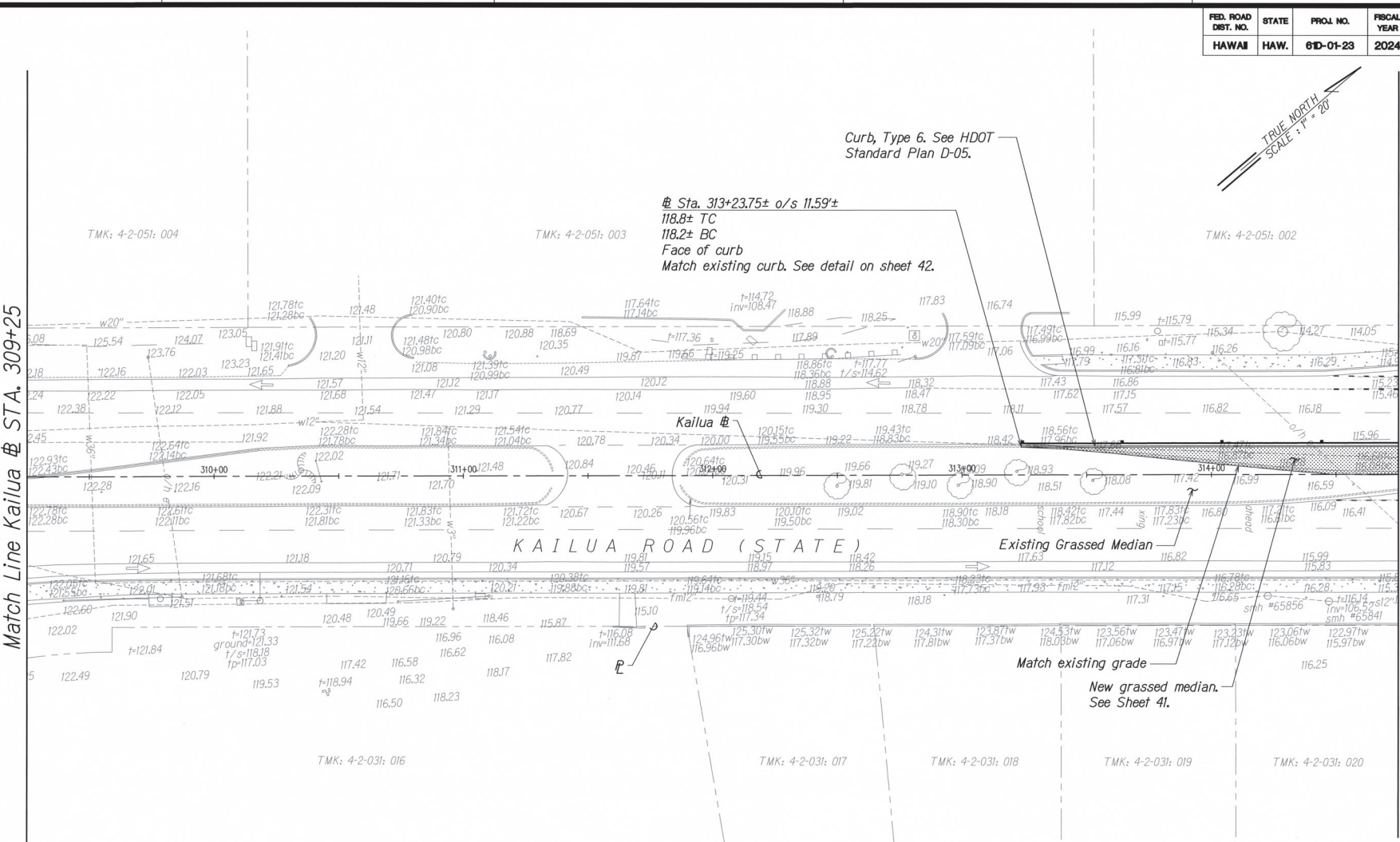
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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	19	87



Match Line Kailua @ STA. 309+25

Match Line Kailua @ STA. 314+75



LEGEND

- New concrete
- New grassed area

APPROVAL	DATE
DESIGNED BY	
CHECKED BY	
DATE	



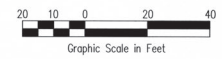
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**ROADWAY IMPROVEMENT
PLAN - 2**

KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Ulukou Street and Ulumenu Drive
Project No. 61D-01-23

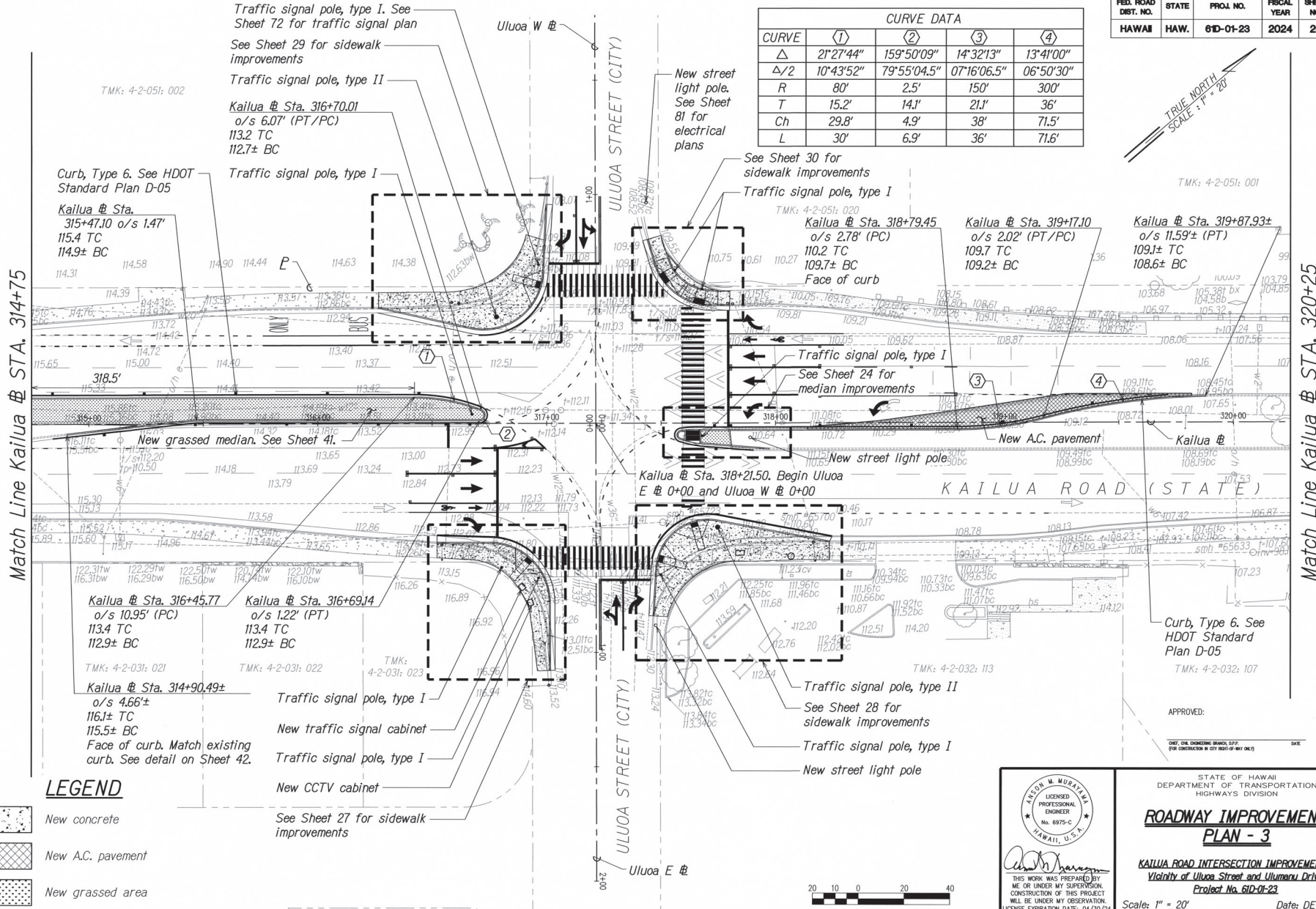
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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	20	87

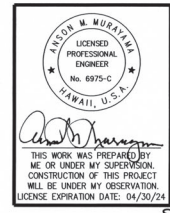
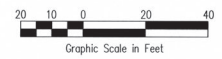
CURVE	CURVE DATA			
	(1)	(2)	(3)	(4)
Δ	21°27'44"	159°50'09"	14°32'13"	13°41'00"
$\Delta/2$	10°43'52"	79°55'04.5"	07°16'06.5"	06°50'30"
R	80'	2.5'	150'	300'
T	15.2'	14.1'	21.1'	36'
Ch	29.8'	4.9'	38'	71.5'
L	30'	6.9'	36'	71.6'



LEGEND

- New concrete
- New A.C. pavement
- New grassed area
- Traffic signal pole, type I
- Traffic signal pole, type II
- New traffic signal cabinet
- New CCTV cabinet
- New street light pole
- See Sheet 27 for sidewalk improvements

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE	



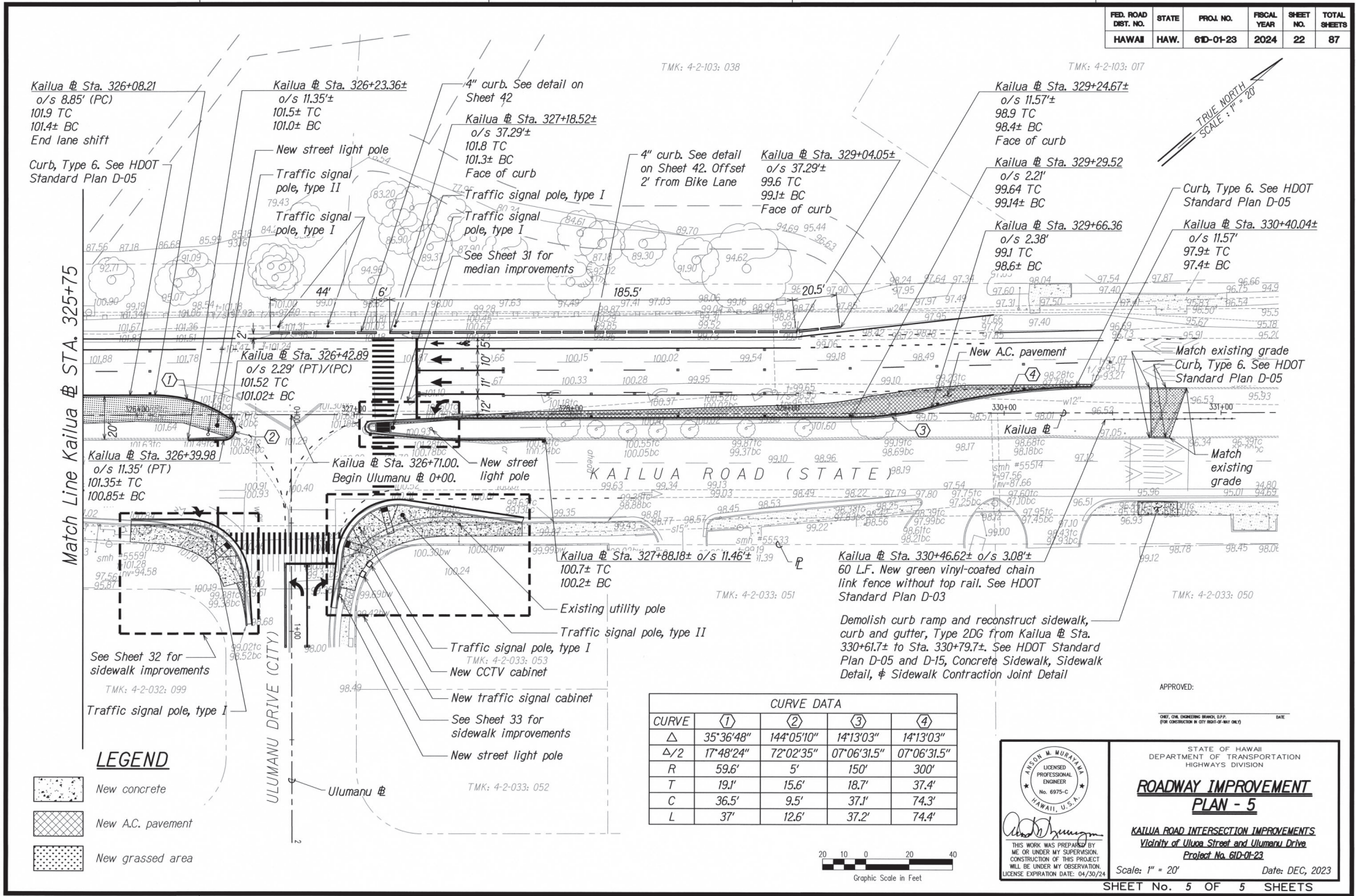
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**ROADWAY IMPROVEMENT
PLAN - 3**

KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Ulua Street and Ulukou Drive
Project No. 61D-01-23

Scale: 1" = 20' Date: DEC, 2023

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	22	87



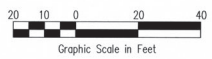
Match Line Kailua @ STA. 325+75

ULUMANU DRIVE (CITY)

LEGEND

- New concrete
- New A.C. pavement
- New grassed area

CURVE DATA				
CURVE	①	②	③	④
Δ	35°36'48"	144°05'10"	14°13'03"	14°13'03"
Δ/2	17°48'24"	72°02'35"	07°06'31.5"	07°06'31.5"
R	59.6'	5'	150'	300'
T	19.1'	15.6'	18.7'	37.4'
C	36.5'	9.5'	37.1'	74.3'
L	37'	12.6'	37.2'	74.4'



APPROVED:

DATE:

ONE OR MORE BRIDGE, OVER OR UNDER OR AT RIGHT-OF-WAY ONLY

Alison M. Mubiana
 LICENSED PROFESSIONAL ENGINEER
 No. 6975-C
 HAWAII, U.S.A.

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**ROADWAY IMPROVEMENT
 PLAN - 5**

KAILUA ROAD INTERSECTION IMPROVEMENTS
 Vicinity of Ulua Street and Ulumanu Drive
 Project No. 61D-01-23

Scale: 1" = 20' Date: DEC, 2023

SHEET No. 5 OF 5 SHEETS

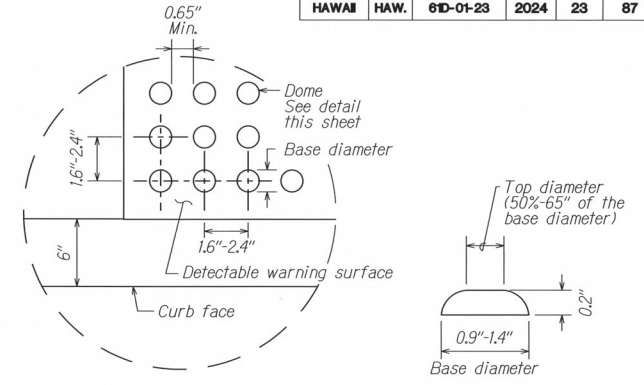
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CURB RAMP NOTES

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	23	87

- These typical details are intended as curb ramp guidelines for design and construction.
- A 2% maximum cross slope shall be maintained in the direction of pedestrian traffic.
- Subject to field conditions, the Engineer shall determine the final location of curb ramps.
- All pullboxes shall be installed away from the curb ramp and within the sidewalk/unpaved area to the maximum extent feasible.
- Where necessary, existing pullboxes, handholes, manholes, etc. shall be adjusted to match curb ramp grade. Adjustments shall not be paid for separately but shall be considered incidental to the various curb ramp items unless indicated otherwise.
- Transitions from ramps to gutters and roadways shall be flush.
- Curb ramps and sidewalks shall be constructed to eliminate ponding to the maximum extent feasible.
- The pedestrian push button shall meet operational and reach requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG):
 - Forward Reach. The maximum height for forward reach shall be 48".
 - Side Reach. The maximum height for side reach shall be 48".
 - Operation. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbs.
- The maximum slopes of adjoining gutters or road surface immediately fronting the curb ramp shall not exceed 5% for Type A, B, C, D, E, and Combination ramps. The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall all be the same level.
- There shall be a 30"x48" level ground surface (2% max. cross slope, both directions) for a forward or side approach, as appropriate, to a pedestrian push button.
- Construction joints are required to join curb ramps with sidewalks.
- Unless otherwise noted, new gutters are required as shown.
- All curb ramps shall be reinforced with 6x6 W1.4/W1.4 welded wire fabric.

- Surface of sidewalks and curb ramps shall be firm, stable, and slip-resistant. This includes the surfaces of pullboxes, valve covers, manhole covers, etc.
- Bed course material is required for curb ramps, sidewalks, and gutters.
- All sidewalks shall provide a minimum clear width of 3'-0" (excluding curb) for pedestrian circulation. If this cannot be met, a minimum 32-inch clear width is allowed for a distance of 24-inches.
- Passing spaces along new sidewalks with 5' clear width or less shall be provided at a maximum of 200' intervals as required by ADA guidelines. The passing area shall be a minimum 5' wide by 5' long as feasible.
- If possible, install utility poles, fire hydrants, light poles, sign posts, pullboxes, etc. off of sidewalk but within the right-of-way.
- Objects protruding from utility poles and walls adjacent to the sidewalks (i.e. wall mounted fire hydrants, telephones, meters on poles, etc.) shall be mounted to meet the current Americans with Disabilities Act Accessibility Guidelines (ADAAG) and will be subject to Engineer's approval.
- If a curb ramp is not constructed according to the plans, the Contractor shall reconstruct the curb ramp at no cost to the State. Construction tolerance for Portland Cement Concrete shall be based on 1/4 inch per 10 ft. (±0.2%). Remedial measures will not be accepted.
- Additional information is available from:
 - Americans with Disabilities Act Accessibility Guidelines (ADAAG), Jan. 1998, as amended through September 2002, The Access Board.
 - Accessible Rights-of-Way: A Design Guide, Nov. 1999, The Access Board.
 - Designing Sidewalks and Trails for Access, Part 1, July 1999, FHWA.
 - Designing Sidewalks and Trails for Access, Part 2, Sept. 2001, FHWA.
- No pullboxes, handholes, manholes, etc. shall be allowed if they contain any openings > 1/2" and are of potentially slippery surface.
- Differences at joints, place breaks, asphalt concrete to concrete interface, etc. shall not exceed 1/4".



ENLARGEMENT

DOME SECTION

NOTES:

- Detectable warnings shall be 24 inches in the direction of travel and extend the full width of the curb ramp or flush surface (does not include flares).
- Truncated domes shall have a diameter of 0.9 to 1.4 inch at the bottom, a diameter of 50%-65% of the base diameter at the top, a height of 0.2 inch and a center-to-center spacing of 1.6 to 2.4 inches measured along one side of a square arrangement.
- Domes shall be aligned on a square grid in the predominant direction of travel to permit wheels to roll between the domes.
- There shall be a minimum of 70 percent contrast in light reflectance between the detectable warning and an adjoining surface, or the detectable warning shall be "safety yellow".
- The material used to provide visual contrast shall be an integral part of the detectable warning surface.
- The detectable warning shall be located so that the edge nearest the curb line or other potential hazard is 6 to 8 inches from the curb line.

DETECTABLE WARNING DETAIL

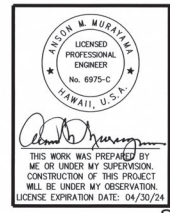
Not to Scale

1
26-33(23)

DESIGNED BY	DATE
CHECKED BY	
IN CHARGE	
PROJECT NO.	
SHEET NO.	
TITLE	

APPROVED: _____

CHIEF CIVIL ENGINEER (BRIDGE, D.P.P. FOR CONSTRUCTION IN CITY RIGHT-OF-WAY ONLY) DATE



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

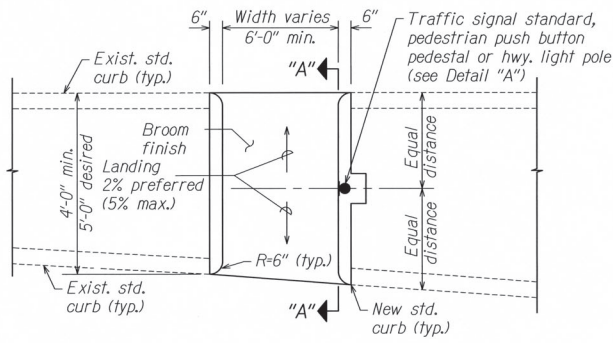
TYPICAL CURB RAMP NOTES & DETAILS

KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Ulukou Street and Ulumani Drive
Project No. 61D-01-23

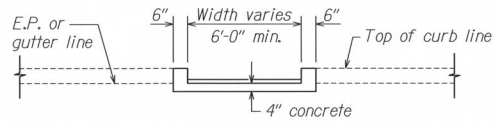
Scale: N/A Date: DEC, 2023

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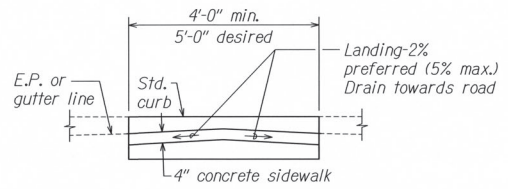
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	25	87



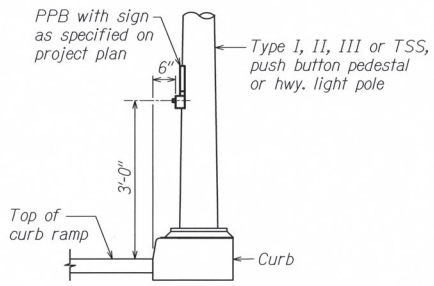
PLAN



ELEVATION

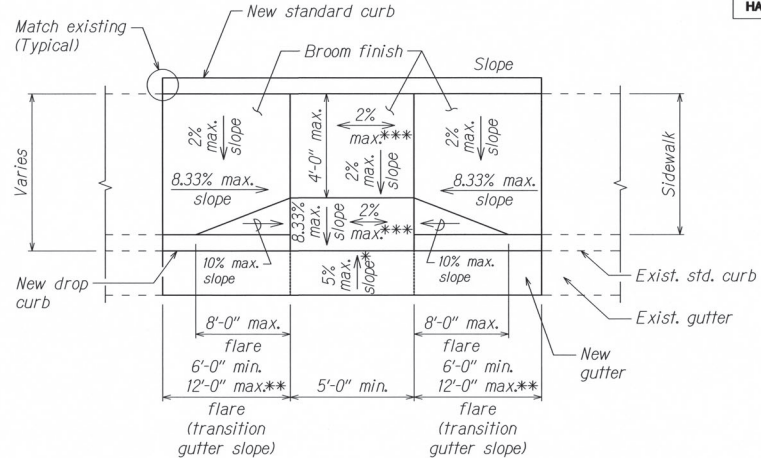


SECTION "A-A"

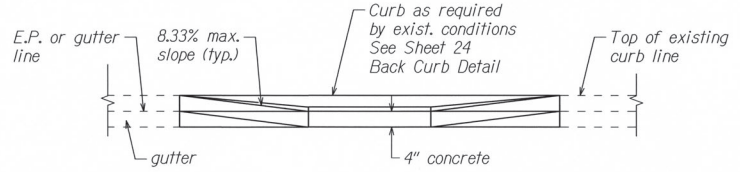


DETAIL "A"

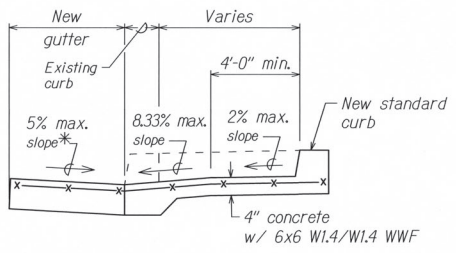
CURB RAMP - TYPE "C"
USE AT MEDIAN CROSSINGS, ISLANDS
 NOT TO SCALE



PLAN



ELEVATION



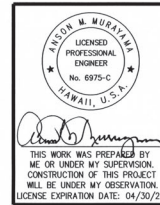
TYPICAL SECTION

CURB RAMP - COMBINATION
 NOT TO SCALE

- * See Curb Ramp Note No. 9.
- ** The slope of the ramp shall take precedence over the length of the ramp. If the maximum slope of a ramp cannot be met within a length of 12 feet, then the slope of the ramp shall be set when the length of the ramp is set at the maximum of 12 feet.
- *** If roadway slope >2% conform to roadway slope and file a Technical Infeasibility (TI) Statement

APPROVED:

DATE: _____
(SEE O&L DRAWING SHEET 579 FOR CONSTRUCTION IN CITY RIGHT-OF-WAY O&L)



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**TYPICAL CURB RAMP
 DETAILS - 2**
 KAILUA ROAD INTERSECTION IMPROVEMENTS
 Vicinity of Ulukou Street and Ulumani Drive
 Project No. 61D-01-23

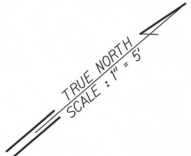
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

Scale: N/A Date: DEC, 2023

P:\land Projects\DOT\DOT - 2023\Traffic Operations\Task\61D-01-23\Kailua_Traffic_SSE\Drawings\25 Typ Curb Ramp Details - 2.dwg, 12/20/23 9:26:47 AM

DESIGNED BY	DATE
CHECKED BY	
IN CHARGE BY	
APPROVED BY	
DATE	
PROJECT NO.	
SHEET NO.	
TOTAL SHEETS	

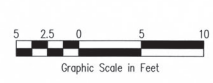
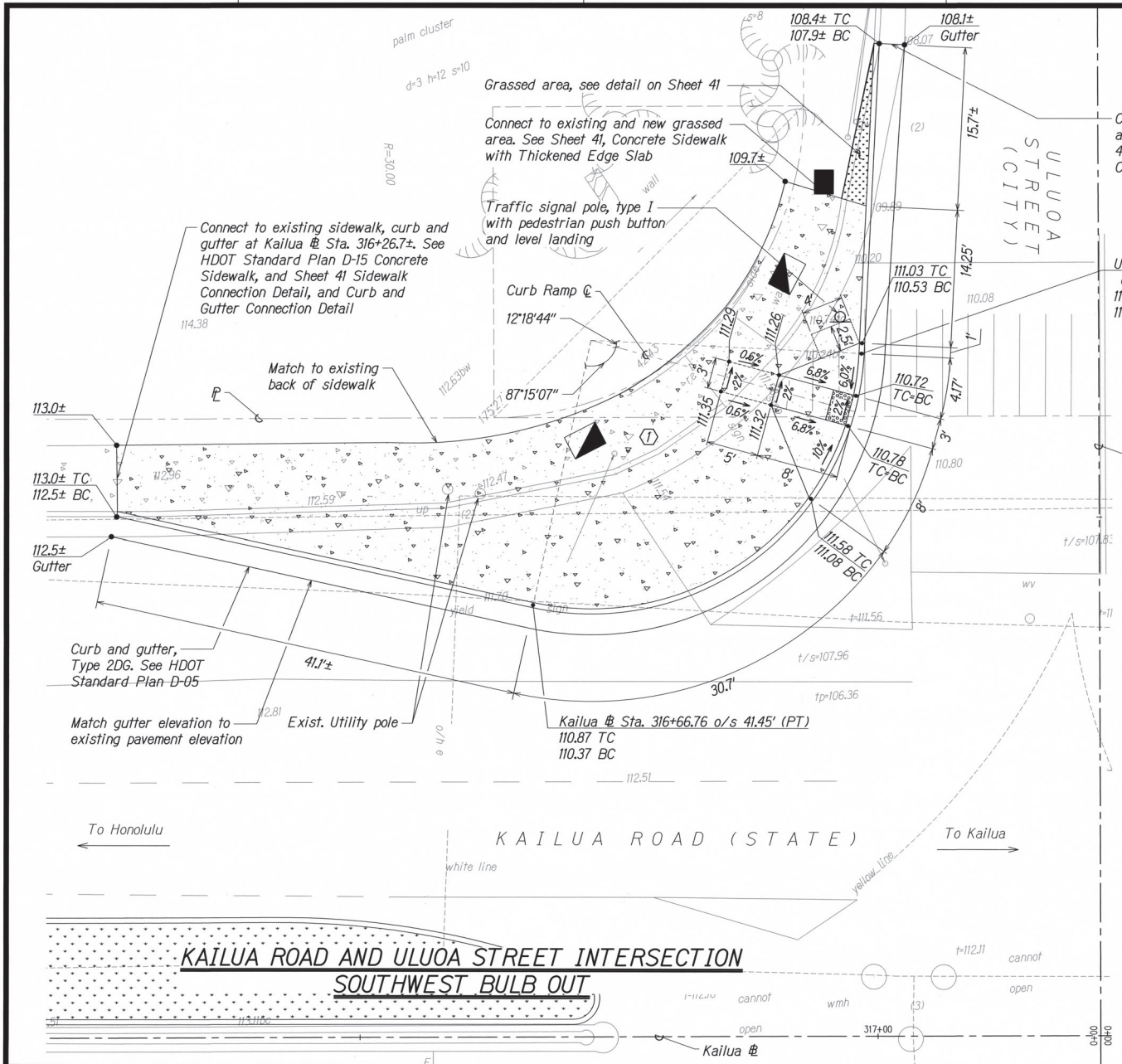
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	29	87



LEGEND

- Concrete area
- Grassed area
- Pedestrian detectable warning

CURVE DATA	
CURVE	Δ
	99°33'51"
	Δ/2
	49°46'56"
	R
	26.4'
	T
	31.22'
	Ch
	40.32'
	L
	45.88'



APPROVED: _____
DATE
ONLY ONE ENDORSEMENT BRANCH OFF OF ONE CONTRACTOR IN ONE SHEET OF ANY ONE

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

CURB RAMP DETAILS - 4

KAILUA ROAD INTERSECTION IMPROVEMENTS
 Vicinity of Uluoa Street and Uluamanu Drive
 Project No. 61D-01-23



Scale: 1" = 5' Date: DEC, 2023

DESIGNED BY	DATE
CHECKED BY	
IN CHARGE	
APPROVED BY	
DATE	

P:\Land Projects\DOT (DOD) - 2021 Traffic Operations Task\PAO 2 Kailua Traffic Signal\SEEDrawing\29 Curb Ramp Details - 4.dwg, 12/26/2023 3:27:10 AM

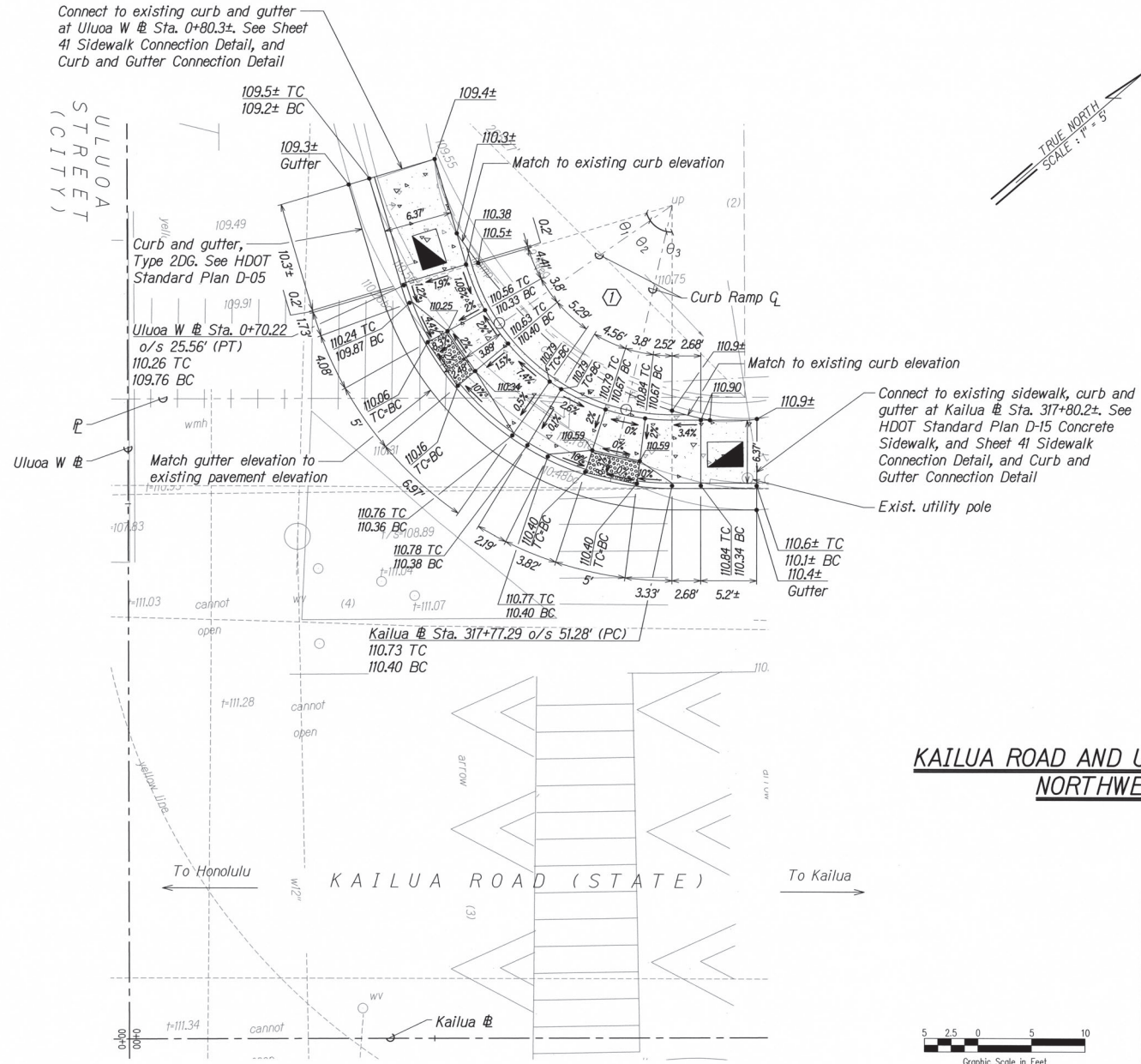
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	30	87

LEGEND

-  Concrete area
-  Pedestrian detectable warning

CURVE DATA	
CURVE	(1)
Δ	73°23'04"
$\Delta/2$	36°41'32"
R	26.4'
T	19.67'
C	31.55'
L	33.81'

- $\theta_1 = 18^\circ 02' 06''$
- $\theta_2 = 42^\circ 42' 23''$
- $\theta_3 = 12^\circ 39' 15''$



KAILUA ROAD AND ULUOA STREET INTERSECTION
NORTHWEST SIDEWALK PLAN

APPROVED: _____ DATE: _____
ONLY ONE ENDORSEMENT BRANCH OFF FOR CONSTRUCTION IN CITY (HAWAII-REV 04/1)

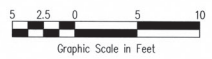
ANSON M. MUBIANA
 LICENSED PROFESSIONAL ENGINEER
 No. 6975-C
 HAWAII, U.S.A.

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

CURB RAMP DETAILS - 5

KAILUA ROAD INTERSECTION IMPROVEMENTS
 Vicinity of Uluoa Street and Ulumani Drive
 Project No. 61D-01-23

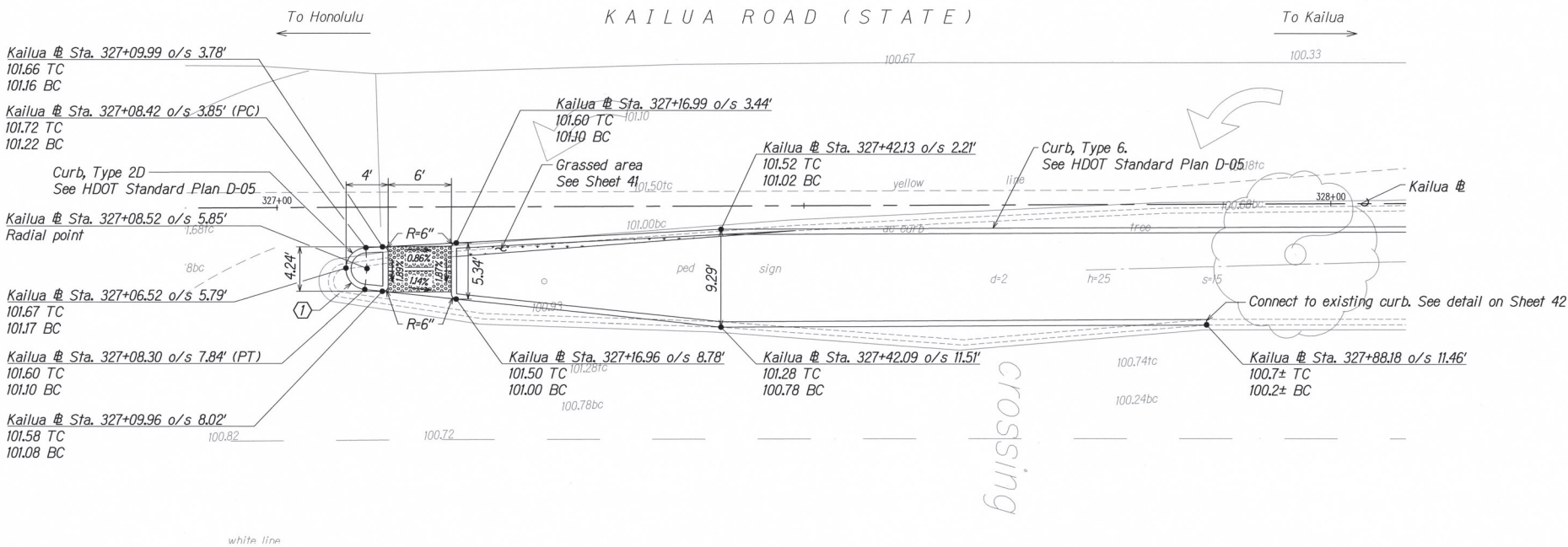
Scale: 1" = 5' Date: DEC, 2023



ORIGINAL	DATE
REVISED	
BY	
DATE	
REVISION	
BY	
DATE	
REVISION	
BY	
DATE	




F:\Land Projects\DOT\DOT - 2023\Traffic Operations\Task\PA02\Kailua\Traffic\RES\Drawings\30-Curb Ramp Details - 5.dwg, 12/06/2023 9:27:15 AM

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	31	87

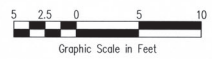


KAILUA ROAD AND ULUMANU DRIVE INTERSECTION
TYPE "C" CURB RAMP DETAIL

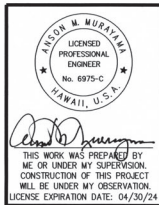
LEGEND

-  Concrete area
-  Grassed area
-  Pedestrian detectable warning

CURVE DATA	
CURVE	(I)
Δ	171°01'11"
Δ/2	85°30'35.5"
R	2.0'
T	25.47'
Ch	3.99'
L	5.97'



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE BY	
NO. _____	



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS - 6




KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Ulua Street and Ulumanu Drive
Project No. 61D-01-23

Scale: 1" = 5' Date: DEC, 2023

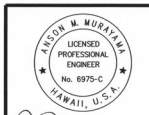
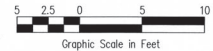
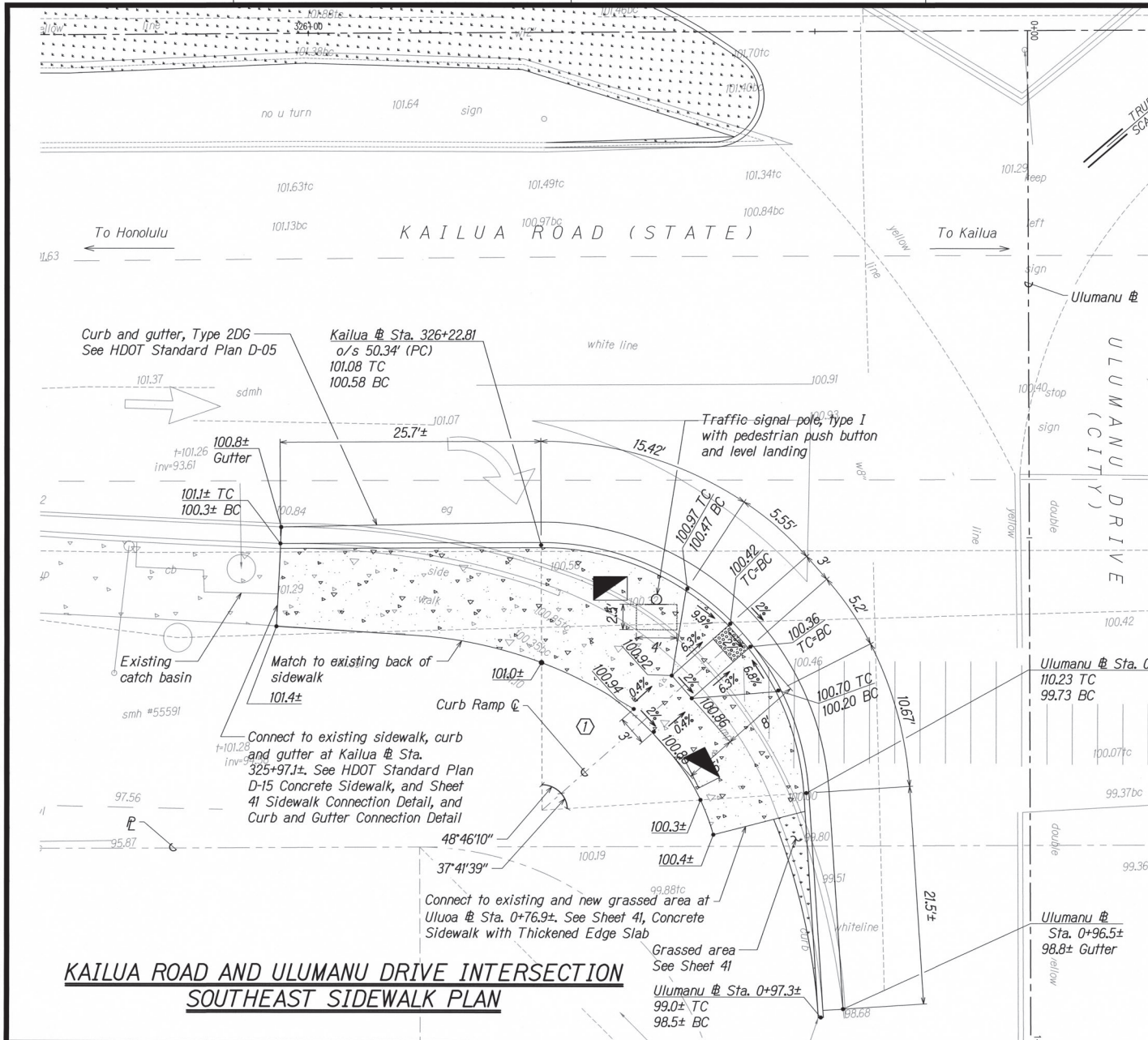
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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	32	87

LEGEND

-  Concrete area
-  Grassed area
-  Pedestrian detectable warning

CURVE DATA	
CURVE	(1)
Δ	86°27'49"
$\Delta/2$	43°13'54.5"
R	26.4'
T	24.82'
Ch	36.17'
L	39.84'



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS - 7

KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Uluaa Street and Ulumanu Drive
Project No. 61D-01-23




Scale: 1" = 5' Date: DEC, 2023

KAILUA ROAD AND ULUMANU DRIVE INTERSECTION
SOUTHEAST SIDEWALK PLAN

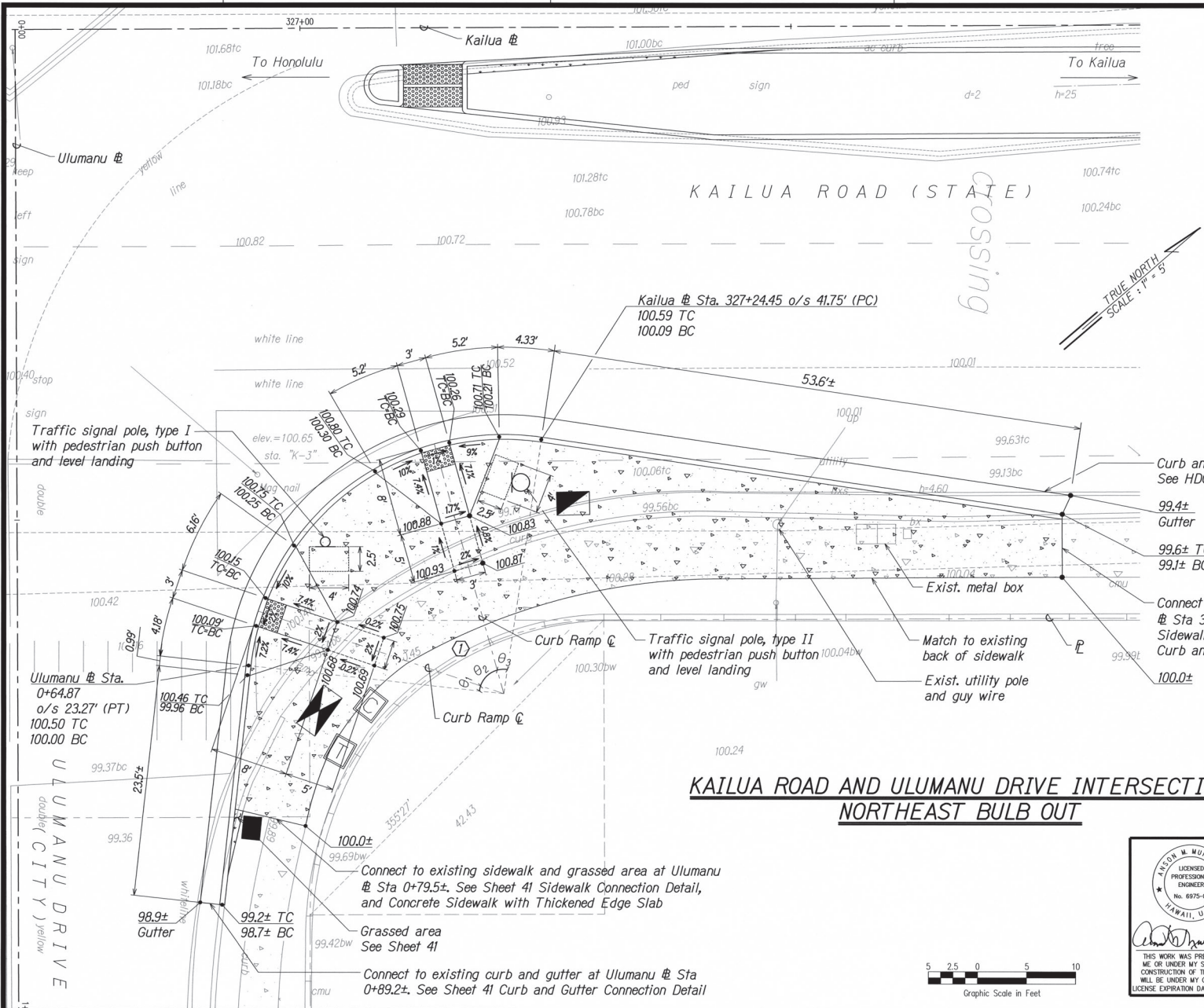
ORIGINAL PLAN	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	
REVISION 5	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	33	87

LEGEND

-  Concrete area
-  Grassed area
-  Pedestrian detectable warning

CURVE DATA	
CURVE	(T)
Δ	83°30'36" $\theta_1 = 12°19'48"$
$\Delta/2$	41°45'18" $\theta_2 = 55°49'53"$
R	26.4' $\theta_3 = 23°56'32"$
T	23.57'
Ch	35.16'
L	38.48'




- Curb and gutter, Type 2DG
See HDOT Standard Plan D-05
- 99.4±
Gutter
- 99.6± TC
99.1± BC
- Connect to existing sidewalk, curb and gutter at Kailua Sta 327+77.5±. See HDOT Standard Plan D-15 Concrete Sidewalk, and Sheet 41 Sidewalk Connection Detail, and Curb and Gutter Connection Detail
- 99.99t
100.0±
- Exist. metal box
- Match to existing back of sidewalk
- Exist. utility pole and guy wire

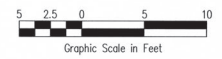
**KAILUA ROAD AND ULUMANU DRIVE INTERSECTION
NORTHEAST BULB OUT**

APPROVED: _____
DATE: _____
(SEE NOTE CONCERNING SIGNATURES FOR CHECKSHEET IN CITY BOOK OF MAY 06/11)

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE BY	
APPROVED BY	


 ALISON M. MURAKAMI
 LICENSED PROFESSIONAL ENGINEER
 No. 4975-C
 HAWAII, U.S.A.
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
CURB RAMP DETAILS - 8
 KAILUA ROAD INTERSECTION IMPROVEMENTS
 Vicinity of Ulukou Street and Ulumanu Drive
 Project No. 61D-01-23
 Scale: 1" = 5' Date: DEC, 2023



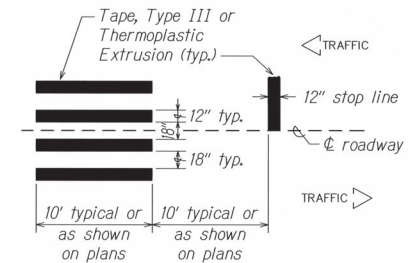
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	34	87

NOTES

- Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
- Existing pavement markings not incorporated in the final traffic pattern shall be removed as directed by the Engineer. Costs shall be incidental to the various pavement marking items.
- Raised pavement markers shall not be installed within crosswalks.
- Final locations of all signs shall be approved by the Engineer prior to any installation work.
- Existing signs that are to be replaced shall not be removed until new signs are installed as replacements, or the messages are no longer necessary.
- Final locations of all Stop Lines shall be approved by the Engineer prior to installation.
- All pavement striping shall be as noted on the legend or plans.
- Backing for all new regulatory and warning signs shall not be spliced.
- All sign panels shall conform to Section 750.01 of Standard Specifications and the latest editions and amendments of the following FHWA publications:
 - "Manual on Uniform Traffic Control Devices for Streets and Highways" (M.U.T.C.D.)
 - "Standard Highway Signs"
 - "Standard Alphabets For Highway Signs"
- All new and relocated signs and markers installed on pipe posts or light standard are to be mounted on new square tubes with band brackets and steel braces.
- Existing signs not shown on these plans shall remain as posted unless otherwise directed by the Engineer. Removal and disposal of existing signs and/or posts as designated on these plans shall be incidental to the various signing items.
- Removal of existing delineators and posts, as directed by the Engineer or shown on the plans, shall be considered incidental to the various signing items.
- Sign posts shall be square tubes posts (2" or 2 1/2") unless shown on these plans or directed by Engineer.
- All preformed pavement marking tapes over existing pavement shall be applied with an approved primer as recommended by the tape manufacturer and as directed by the Engineer. The primer shall be allowed to dry to the tacky stage prior to tape application.
- All pedestrian warning signs with supplemental sign shall be on fluorescent yellow-green retroreflective background with a black legend and border.

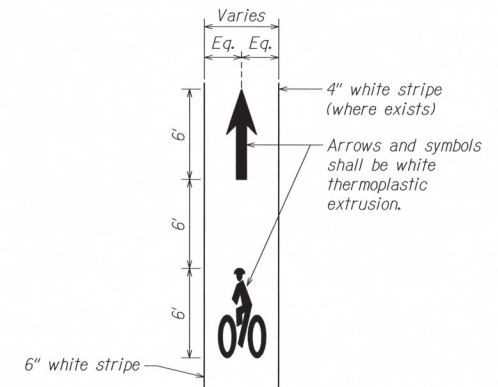
LEGEND

-
- 4" white profiled thermoplastic stripe, 10' long
 - Type "C" raised pavement markers @ 40' O.C.
 - 8" white stripe with Type "C" raised pavement markers @ 20' O.C. (tape, Type I or thermoplastic extrusion)
 - 4" double solid yellow with Type "D" raised pavement markers @ 20' O.C. (tape, Type I or thermoplastic extrusion)
 - 6" yellow edge stripe with Type "H" raised pavement markers at 40' O.C. (tape, Type II or thermoplastic extrusion)
 - Lane change restriction marking
 - 10' white profiled thermoplastic stripe
 - Type "C" raised pavement markers at 20' O.C.
 - 4" white stripe (tape, Type I or thermoplastic extrusion)
 - 6" white edge stripe with Type "C" raised pavement markers @ 40' O.C. (tape, Type II or thermoplastic extrusion)
 - 4" or 6" guide line (tape, Type III or thermoplastic extrusion except for bus bays)
 - Channelizing island or deceleration lane gore (tape, Type II or thermoplastic extrusion)
 - Crosswalk and stop line. All stop lines shall be 10' from crosswalk unless otherwise noted. (Tape, Type III or thermoplastic extrusion)
 - Pavement arrow (tape, Type III or thermoplastic extrusion)



CROSSWALK STRIPING DETAIL

Not to Scale



BIKE LANE PAVEMENT MARKING DETAIL

Not to Scale

ORIGINAL PLAN	DATE
REVISED BY	
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	
NO. 11	
NO. 12	
NO. 13	
NO. 14	
NO. 15	
NO. 16	
NO. 17	
NO. 18	
NO. 19	
NO. 20	
NO. 21	
NO. 22	
NO. 23	
NO. 24	
NO. 25	
NO. 26	
NO. 27	
NO. 28	
NO. 29	
NO. 30	
NO. 31	
NO. 32	
NO. 33	
NO. 34	

ANSON W. MUBIANA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

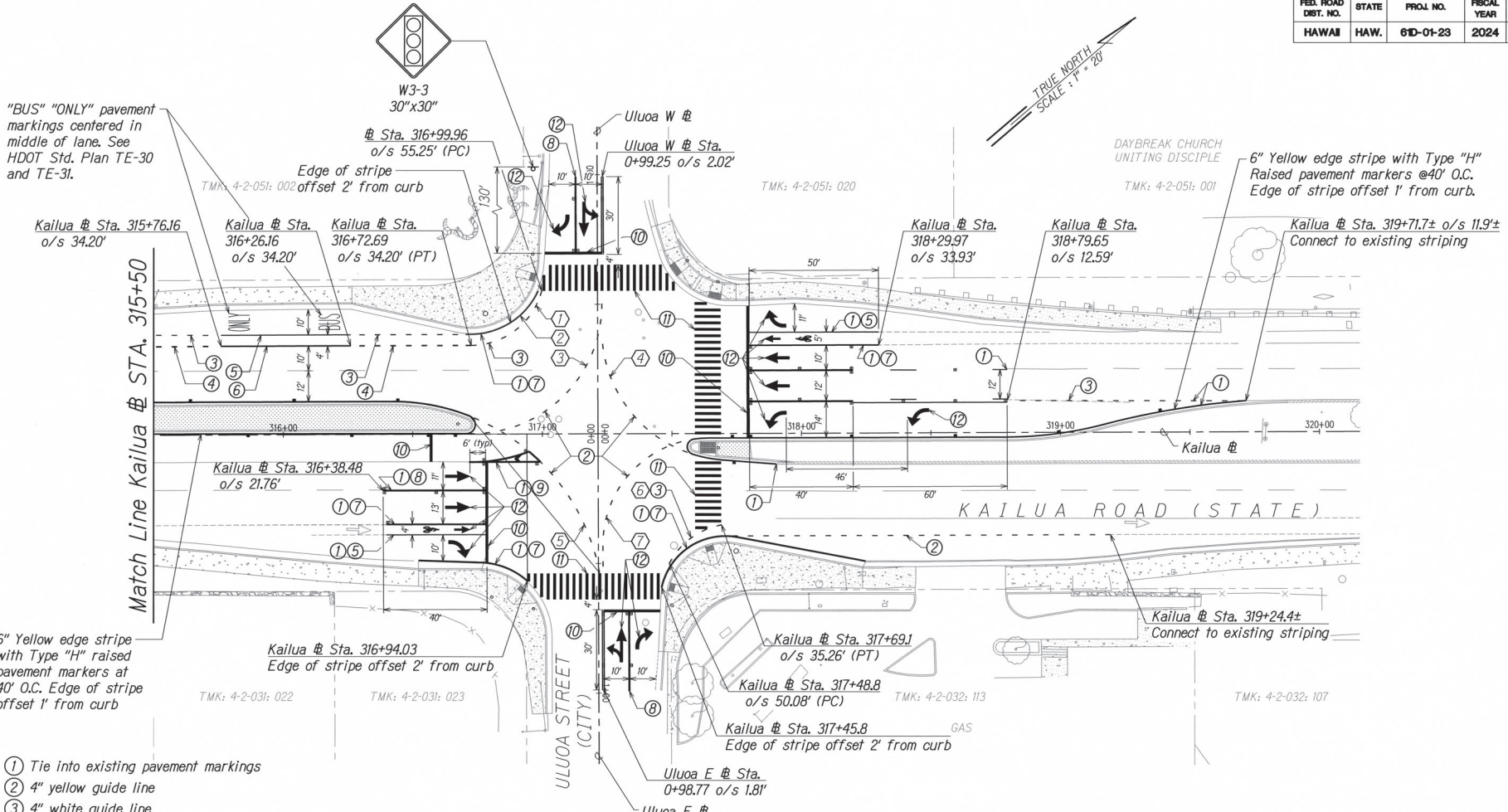
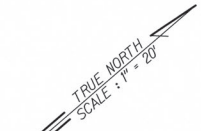
SIGNAGE AND STRIPING NOTES

KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Uluka Street and Ulumenu Drive
Project No. 61D-01-23

Scale: N/A Date: DEC, 2023

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	36	87



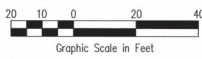
"BUS" "ONLY" pavement markings centered in middle of lane. See HDOT Std. Plan TE-30 and TE-31.

6" Yellow edge stripe with Type "H" Raised pavement markers @40' O.C. Edge of stripe offset 1' from curb.

6" Yellow edge stripe with Type "H" raised pavement markers at 40' O.C. Edge of stripe offset 1' from curb

- ① Tie into existing pavement markings
- ② 4" yellow guide line
- ③ 4" white guide line
- ④ 6" white guide line
- ⑤ 4" white stripe
- ⑥ 6" white stripe
- ⑦ 6" white edge stripe with Type "C" RPM @ 40' O.C.
- ⑧ 8" white stripe with Type "C" RPM @ 20' O.C.
- ⑨ 8" white stripe with Type "C" RPM @ 20' O.C. and 12" white transverse line
- ⑩ 12" white stop line
- ⑪ 10' wide crosswalk
- ⑫ Pavement arrow

CURVE DATA								
CURVE	①	②	③	④	⑤	⑥	⑦	CURVE
Δ	74°55'52"	65°26'23"	90°07'08"	66°35'08"	58°08'25"	52°27'08"	76°55'57"	Δ
Δ/2	37°27'56"	32°43'11.5"	45°03'34"	33°17'34"	29°04'12.5"	26°13'34"	38°27'58.5"	Δ/2
R	28.4'	28.75'	50'	50'	81'	28.4'	25.35'	R
T	21.8'	18.5'	50.1'	32.9'	45.0'	14.0'	20.1'	T
Ch	34.6'	31.1'	70.8'	54.9'	78.8'	25.1'	31.5'	C
L	37.1'	32.8'	78.6'	58.2'	82.2'	26.0'	34.0'	L

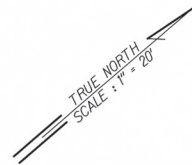
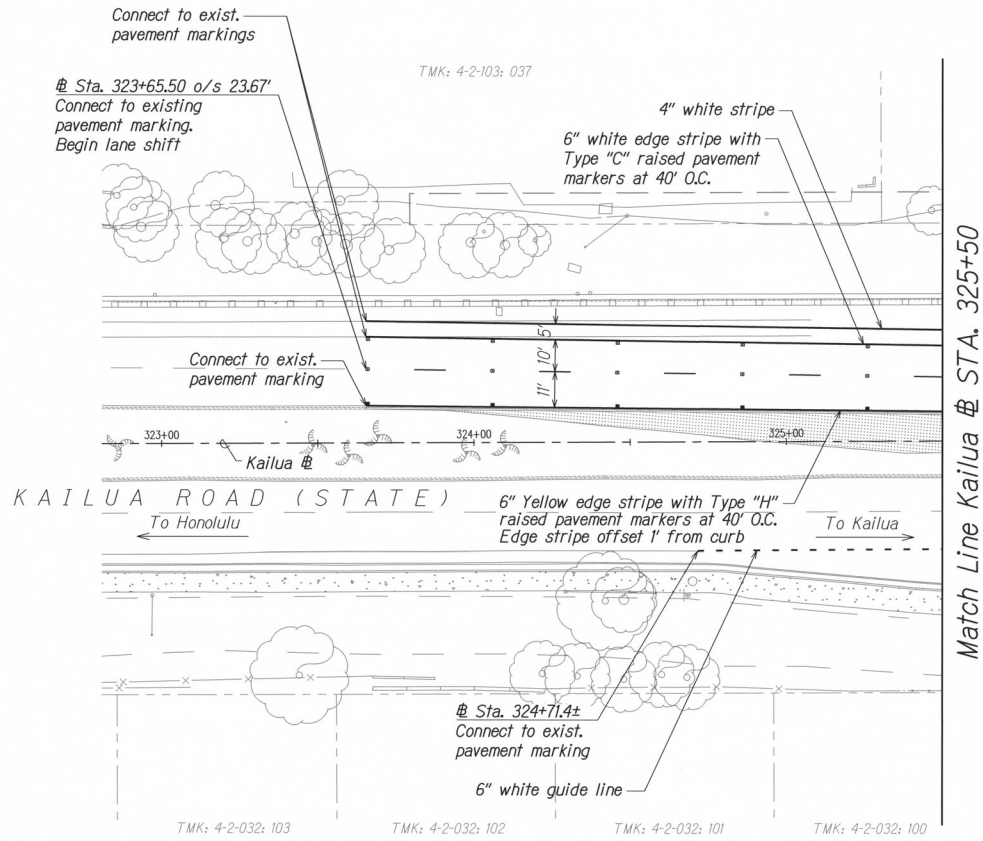


DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE	

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

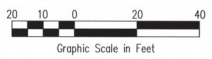
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
SIGNAGE AND STRIPING PLAN - 2
 KAILUA ROAD INTERSECTION IMPROVEMENTS
 Vicinity of Ulua Street and Ulumani Drive
 Project No. 61D-01-23
 Scale: 1" = 20' Date: DEC, 2023

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	37	87



Match Line Kailua @ STA. 325+50

ORIGINAL PLAN	REVISED PLAN	DATE



ANSON W. MURAKA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNAGE AND STRIPING PLAN - 3

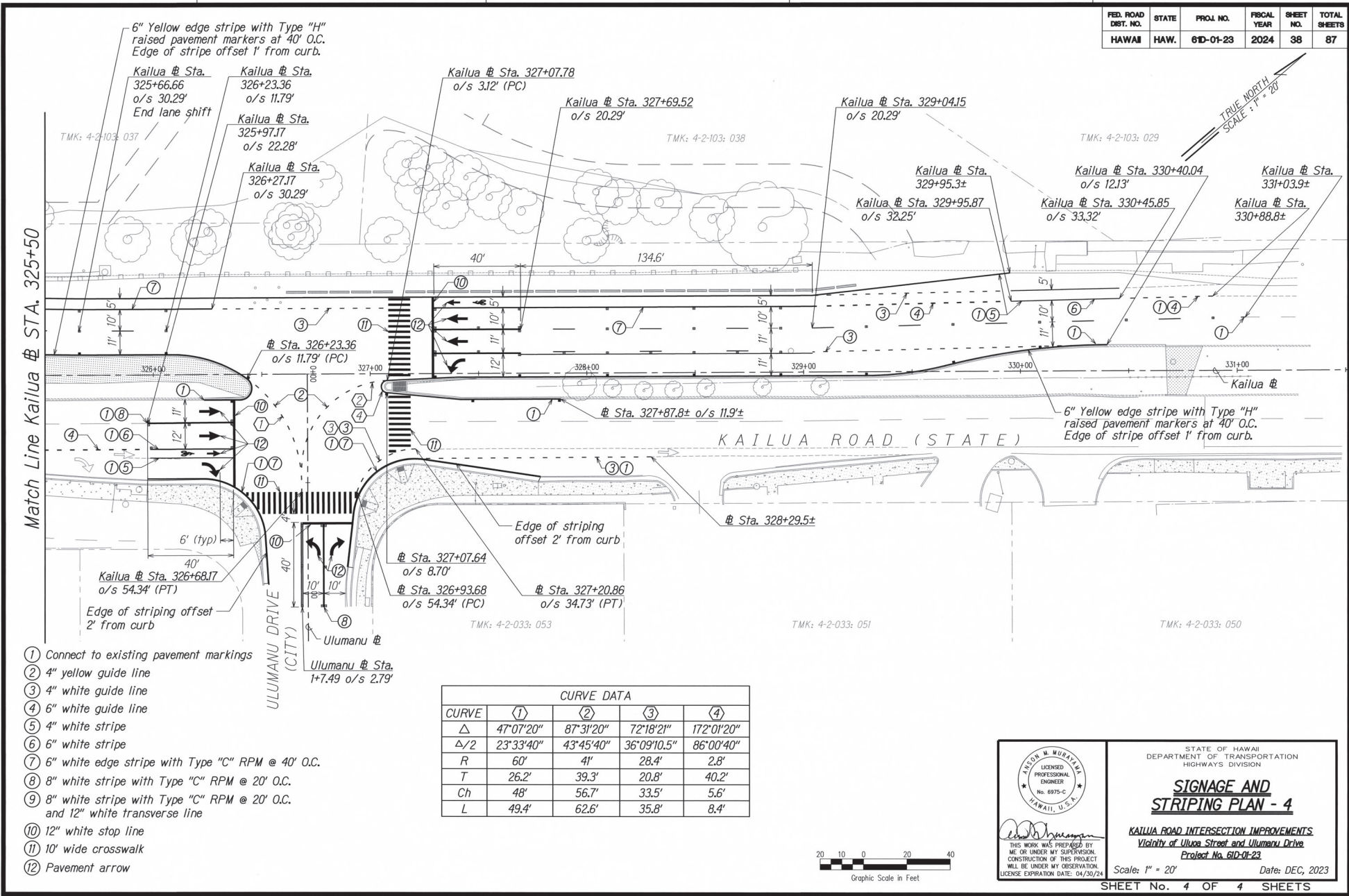
KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Ulukou Street and Ulumenu Drive
Project No. 61D-01-23

Scale: 1" = 20' Date: DEC, 2023

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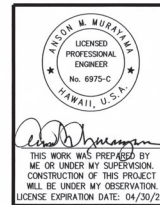
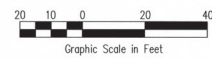
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	38	87



Match Line Kailua Sta. 325+50

- ① Connect to existing pavement markings
- ② 4" yellow guide line
- ③ 4" white guide line
- ④ 6" white guide line
- ⑤ 4" white stripe
- ⑥ 6" white stripe
- ⑦ 6" white edge stripe with Type "C" RPM @ 40' O.C.
- ⑧ 8" white stripe with Type "C" RPM @ 20' O.C.
- ⑨ 8" white stripe with Type "C" RPM @ 20' O.C. and 12" white transverse line
- ⑩ 12" white stop line
- ⑪ 10' wide crosswalk
- ⑫ Pavement arrow

CURVE	CURVE DATA			
	①	②	③	④
Δ	47°07'20"	87°31'20"	72°18'21"	172°01'20"
Δ/2	23°33'40"	43°45'40"	36°09'10.5"	86°00'40"
R	60'	4'	28.4'	2.8'
T	26.2'	39.3'	20.8'	40.2'
Ch	48'	56.7'	33.5'	5.6'
L	49.4'	62.6'	35.8'	8.4'



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNAGE AND STRIPING PLAN - 4

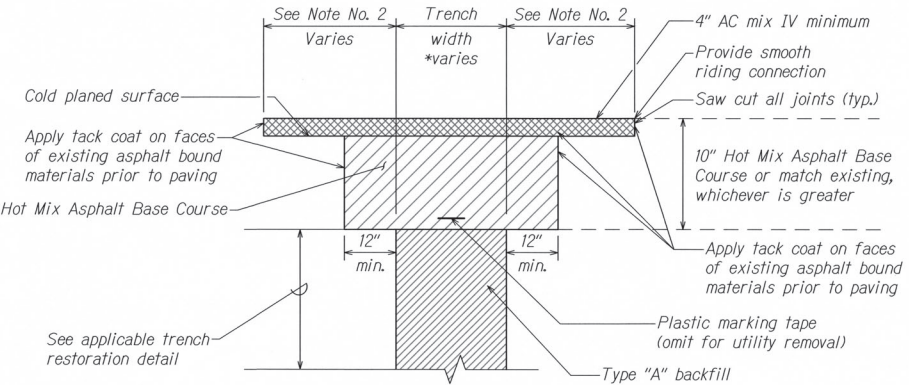
KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Ulua Street and Ulumanu Drive
Project No. 61D-01-23

Scale: 1" = 20' Date: DEC, 2023

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	39	87

NOTES

1. Tack coat faces of existing asphalt bound materials prior to filling excavation with new asphalt bound materials.
2. For trench restoration on State-owned Right of Way:
 - a. If the trench is aligned perpendicular to the direction of travel or skewed at angles of 45 degrees or greater to longitudinal direction of the roadway, repave 6 feet on each side of the trench.
 - b. If the trench is aligned parallel to the direction of travel or skewed at angle of less than 45 degrees to the longitudinal direction of roadway, repave to the edge of lane in which edge of trench is located. Repave to the edge of gutter if less than 2-ft from the edge of trench to the edge of gutter.
3. All work performed shall be subject to inspection by the State and shall be to the State's satisfaction.
4. Construct the trench restoration in accordance with the Hawaii Standard Specifications for Road and Bridge Construction (2005) and its Special Provisions, and the Specification of Installation of Miscellaneous Improvements within State Highways.
5. Pavement Smoothness for HDOT roadways - Applicable to areas where the trench activities require shoring, sheet piling and dewatering or as directed by the District Engineer.
 - a. Obtain a profile of the existing roadway that is to have a new surface as a result of the restoration of the trench excavation and submit the profile to the District Engineer before any work for trench excavation begins.
 - b. Obtain a profile of the roadway surface after the roadway surface has been repaved and submit the profile to the District Engineer. The profile of the roadway surface after repaving shall be equal to or smoother than the profile obtained before trench excavation began.
 - c. The distance from the paved surface to the testing edge of a ten-foot long straight edge between two points of contact shall not exceed 3/16 inch.
6. Place all unbound materials in the trench as follows:
 - a. Compaction by water jetting or ponding is not permitted.
 - b. All unbound materials, except the permeable base and ASTM C-33 Size 67:
 - Place material in accordance with Sections 204, 206, 603, 624 and 625 of the Hawaii Standard Specifications for Road and Bridge Construction (2005).
 - Take one compaction test per lift for 300 lineal feet of trench. Submit compaction test results to the District Engineer.
 - c. Permeable Base
 - Place permeable material in uniform horizontal layer not exceeding 9 inches in compacted thickness.
 - Compact each layer with 8 passes of a vibrating plate compactor. Use hand tamper if trench is too narrow to accommodate the vibrating plate compactor.
 - If an existing layer of permeable base is encountered, provide new permeable base to match the existing permeable base thickness and depth and provide a geotextile permeable separator.
 - d. ASTM C-33 Size 67:
 - Material placed under water need not be compacted.
 - Material placed above water:



TYPICAL TRENCH PAVEMENT SECTION (STATE)
Not to Scale

1
40/39

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE BY	
DATE	
NO. OF SHEETS	
SHEET NO.	
PROJECT NO.	

APPROVED: _____
DATE: _____
SEE CIVIL ENGINEER BOARD LIST FOR CERTIFICATION IN CITY 800-57-6110

ARON M. MURAKAWA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

Aron M. Murakawa

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

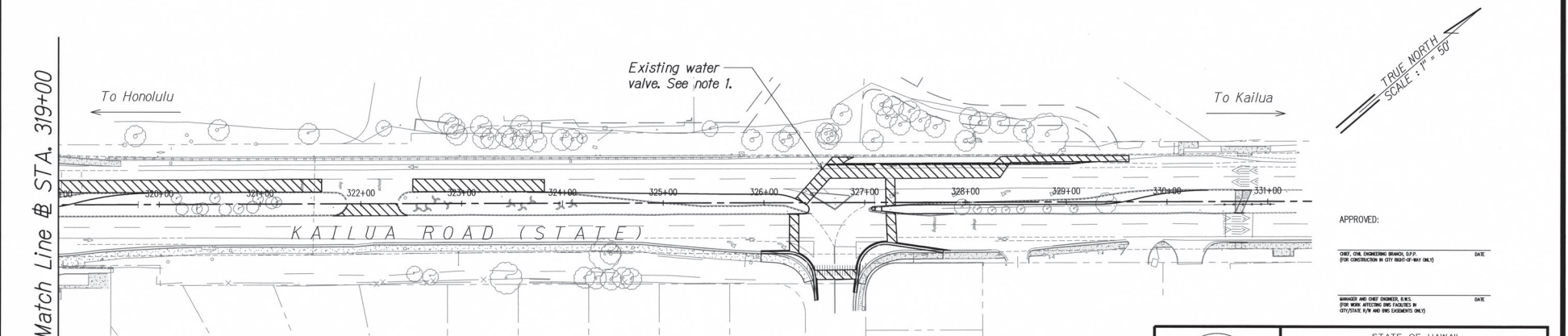
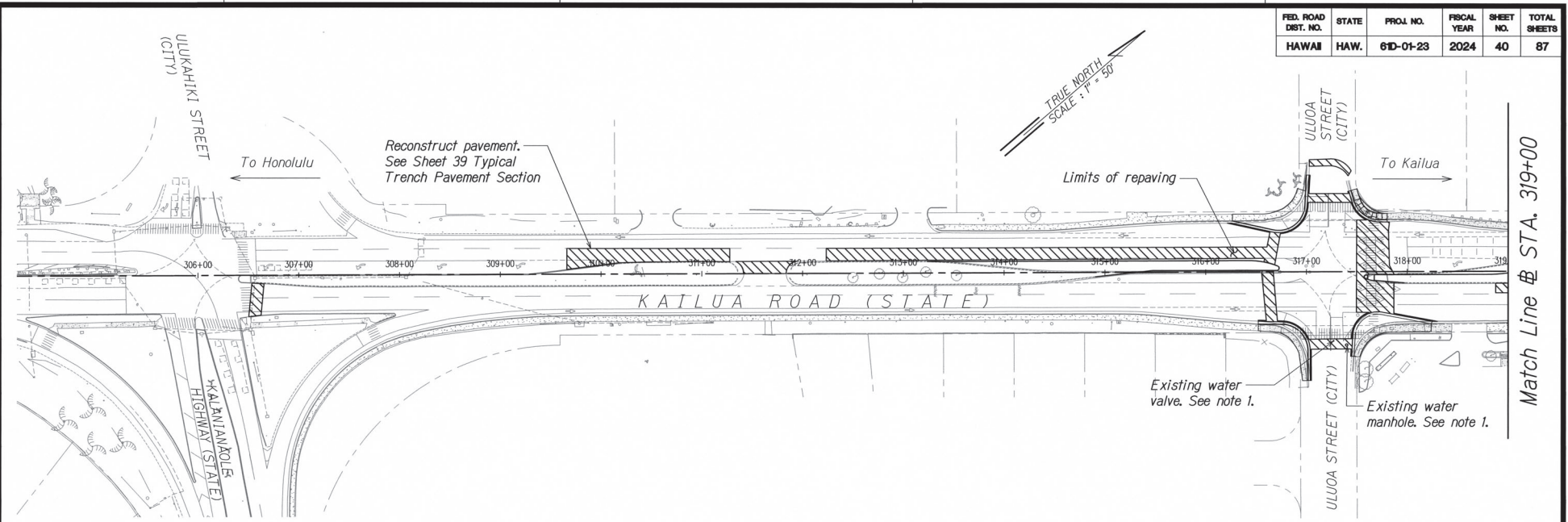
PAVING NOTES & DETAILS

KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Uluka Street and Ulumau Drive
Project No. 61D-01-23

Scale: N/A Date: DEC, 2023

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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61D-01-23	2024	40	87



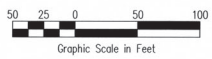
ORIGINAL	REVISED	DATE

Match Line @ STA. 319+00


Match Line @ STA. 319+00

NOTES:
 1. The contractor shall adjust all manhole frames, valve boxes, and meter boxes within the reconstructed or resurfaced areas. The Contractor shall be responsible for "referencing" these manholes, valves boxes, and meter boxes to facilitate the adjustments

LEGEND
 Repaving



APPROVED:
 _____ DATE _____
CHIEF OF ENGINEERING BRANCH, D.P.P. (FOR CONSTRUCTION IN CITY ROAD-OF-WAY ONLY)
 _____ DATE _____
MANAGER AND CHIEF ENGINEER, S.E.C. (FOR ROAD WITHIN THE JURISDICTION OF CITY/STATE, T.W. AND THE ENGINEER ONLY)



ALISON M. MURAKAMI
 LICENSED PROFESSIONAL ENGINEER
 No. 6975-C
 HAWAII, U.S.A.

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

PAVING PLAN

KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Uluohi Street and Uluohi Drive
 Project No. 61D-01-23

Scale: 1" = 50' Date: DEC, 2023

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